

This is an opportunity to talk about the burden on households of being subjected to unwanted EM radiation, the costs of shielding, finding other places to live, being unable to work, etc.

The FCC asks" Are there other metrics we should consider that are unrelated to speed or service quality such as mobility? Para 114 p 41

NEPA. "We note that recipients deploying new infrastructure also would have to comply with the National Environmental Policy Act and other relevant federal environmental statutes, as well as all local requirements for construction. Para 136 pg 49

Equipment, knowledge and experience needed by Consumer. The FCC admits that if people don't have a computer or digital literacy, broadband won't be for everyone. Para 141 p 51 (Imagine people with Alzheimers trying to learn how to do computer calls)

The FCC wants to know how to best "achieve synergies with the connectivity objectives articulated for schools, libraries, and rural health care facilities. Para 149 p 53

"We seek comment on whether any additional public interest obligations should apply to Universal Service Fund recipients." Even if they aren't given funds, should the company be required to meet minimum requirements. Para 150 p 54

The FCC does not believe that transitioning these forms of support would violate the 5th Amendment Takings Clause and notes that " The purpose of universal service is to benefit the consumer, not the carrier." Para 240 pg 84-5

One CAF Provider Per Unserved Area. The FCC wants to know what risks there are of such arrangements. Para 282 p 95. For those who are electrosensitive, think of the risk they face if the FCC awards to funds to a wireless provider.

Prospect of mobile wireless broadband everywhere!. AT&T has proposed that the FCC support an Advanced Mobility Fund until there "were no more areas unserved by mobile wireless broadband and voice service." Para 403 p 125.

Monitoring. The FCC asks what kinds of field inspections and tests are appropriate? Para 477 p144 (EMR Policy believes a huge number of cell antennas are already in violation and the FCC does nothing)

Limit Universal Service Contribution Burden on Households. The FCC seeks to not impose an excessive burden on American consumers who are ultimately the payers for the Fund. Para 487 p 147

Data. The FCC intends to use a "data-driven process to analyze the proposed reforms. Commenters should submit data to explain and substantiate their position or concerns. " para 536 p 168 "We note that there appear to be significant complexities associated with determining the magnitude of cost savings passed on to consumers. "Para 571 p 180

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Public Comments on Developing an Unified Intercarrier Compensation: =====

Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Jennifer

Last Name: Stahl

Mailing Address: 1427 Westglenn Dr

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Country: United States

State or Province: IL

Postal Code: 60565

Organization Name: null

The Seletun Scientific Report states we should reduce our exposure to wireless technologies. <http://www.iemfa.org/index.php/media-info/videos>

The switched telephone network must be maintained.

The Architectural and Transportation Barriers Compliance Board ("the Access Board"), is the federal agency that administers the Americans with Disabilities Act. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities (<http://www.access-board.gov/research/ieq/intro.cfm>). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

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Last Name: Firstenberg

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City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87502

Organization Name: Cellular Phone Task Force

On December 21, 2009 AT&T submitted comments the FCC stating that the public switched telephone network was "a relic of a bygone era." AT&T asked the FCC to set a deadline for completing the transition from telephone lines to broadband.

On February 7, 2011, FCC Chairman Julius Genachowski gave a speech in which he said that "the Internet is replacing the telephone as today's essential communications service." "Broadband serves the same role in the 21st Century that telephone service served in the 20th Century," Genachowski said. "So we need to modernize this program." He announced that the following day the Commission would vote on a plan to funnel Universal Service Funds away from the switched telephone network and into broadband.

On February 8, 2011 the FCC released the proposed rule that is the subject of my comments. This rule, if adopted, will phase out some subsidies for the switched telephone network within two years. It proposes to reduce the allowable per-minute long distance charges for phone calls, which will make it less profitable to operate the switched telephone network. It is a first step in the transition to 100% broadband communication that the FCC assumes is in our future.

We need to maintain the switched telephone network. People with electromagnetic hypersensitivity comprise at least 3% of the population according to the United States Access Board. That is approximately 10 million people. They have limited or no ability to use computers, no ability to use cell phones, and depend on analog phone service for their communication needs. When there is no more analog phone service, there will also be no more analog phones. Ten million people will be cut off from the outside world.

The maintenance of the public switched telephone network needs to be a policy priority for the foreseeable future.

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Submitter Info:

First Name: Beth

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State or Province: CA

Postal Code: 94306

Organization Name: National CFIDS Foundation

As many of the effects of wireless technology (as well as the overall increase of all electric, radio, etc. frequencies) have yet to be determined or studied on humans, I urge the FCC to please allow companies to maintain landline phone options, esp. for the poor, elderly and disabled.

Thank you.

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Submitter Info:

First Name: Cynthia

Last Name: Jackson

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City: Mason

Country: United States

State or Province: TX

Postal Code: 76856

Organization Name: null

Please maintain the switched telephone service. I know many people who suffer from EMF sensitivities, including myself. Ten million Americans suffer from this disease.

We cannot use wireless technology, including computers, and so have to rely on landlines for communication. Please help us, who are already isolated from our communities due to EMF illness, not lose this vital connection

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Submitter Info:

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Last Name: Keith

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City: Stillwater

Country: United States

State or Province: OK

Postal Code: 74075

Organization Name: null

There are THREE BIG REASONS I must have my land line:

The hand held computer used for transmitting my orders in for my card merchandising orders does NOT work on VOP or cell phone. I tried it on VOP and it doesn't work! It must have a land line to work.

Also, I CANNOT GET BROADBAND. I have wireless off of a cellphone tower, and those radio are so fragile that anything can knock them off line. I often times don't have internet. Also, VOP won't work when the internet is too busy. Sometimes the internet is so busy that it won't do a download or upload of anything.

Also, there are SEVERAL people I know who are sensitive to the electrical frequencies in cell phones and cannot have one. They also cannot have a computer in their home because of the electrical frequencies. HOW ARE THEY SUPPOSED TO HAVE A PHONE?

PLEASE don't do anything as drastic as getting rid of landlines. Some people must have them to function, (i DO) AND I also want it for a back up for when technology fails.

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Submitter Info:

First Name: dennis

Last Name: jantz

Mailing Address: 8750 Greenwood Ave.

City: Munster

Country: United States

State or Province: IN

Postal Code: 46321

Organization Name: null

Dear Sir or Madam,

Regarding the FCC proposal to eliminate many telephone landlines: I strongly urge the FCC to first study the health issues associated with wireless signal transmission. I have a sister, living in California, who is very sensitive to these wireless transmissions. The health of all of our citizens must be protected by the US government. There appear to be some evidence that many of our citizens are RF and EMF sensitive.

Thank you,

Dennis and Claudia Jantz

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Submitter Info:

First Name: Ian

Last Name: Greenberg

Mailing Address: 1117 Capital Club Circle

City: Atlanta

Country: United States

State or Province: GA

Postal Code: 30319

Organization Name: null

I suffer from Electrical Sensitivity. As a result, I cannot be around wireless devices or use any wireless services.

According to the Architectural and Transportation Barriers Compliance Board an estimated 3% of the population, or almost 10 million Americans, have this type of sensitivity.

(www.access-board.gov/research/ieq/intro.cfm).

Since I cannot use wireless technology and have difficulty using computers, I am dependant on the switched telephone network for voice communication. Please don't eliminate landlines because this will leave millions of Americans like me without even basic telephone service.

Thank You!

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Submitter Info:

First Name: Cheryl Alison

Last Name: Alison

Mailing Address: 82 Bristol Road Apt 1

City: Medford

Country: United States

State or Province: MA

Postal Code: 02155

Organization Name: null

There are so many reasons to ask you in the position to do so to maintain landlines in this country. I ask you for our health, as cellphones continue to raise red flags due to their constant signal output. My sister and her family are sickened by being in the presence of a cellphone or wireless transmitter: they literally need you to turn it off in their house or it affects their health, ability to sleep, function: this has already severely limited their lives, a limit that would become astronomical if you go through with the elimination of landlines. She and her family are not alone, but in populous company: your decision could help, or damage the lives of many--I hope you will choose the former. Cell phones have simply not been in constant use long enough to know how damaging their 24 hr presence can be. Please DO NOT get rid of our alternative when more and more science is beginning to understand that these are not harmless devices. I ask you this too for our living environment's health: please allow us the option to make a choice for a communication device that requires less energy to run. This country is proud of its ability to offer choice to its citizens: if you remove landlines, you literally make impossible our choice for a mode of communication that is safer (less easy to intercept), proven to be harmless to our health, and safer for our environment (I'm not aware that, for example, landlines have been killing bees). You have our future health in your hands, you have the democracy of telecommunications in your hands: DO not, please, make a choice that will require great financial effort, and backtracking, to undo, because all scientific evidence points to the fact that at some point it will HAVE to be undone. This country specializes in brash uninformed decisions, or decisions made in the face of contradicting information. Please act with wisdom and for the health and safety of telephone users now and in the future.

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Submitter Info:

First Name: Sarah

Last Name: Pruski

Mailing Address: 82 Bristol Road

City: Medford

Country: United States

State or Province: MA

Postal Code: 02155

Organization Name: null

Please do not eliminate landline telephone service. I believe the negative cultural and health affects of wireless cell phones are just beginning to surface. Additionally, eliminating the cheaper alternative of landline telephone service would disadvantage the poorer and more remote population of the U.S.

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Submitter Info:

First Name: Liberty

Last Name: Goodwin

Mailing Address: P.O. Box 40441

City: Providence

Country: United States

State or Province: RI

Postal Code: 02940

Organization Name: Toxics Information Project,

I am very concerned about any replacement of land lines with wireless services. Millions of people already suffer severe health effects from electromagnetic fields - and are unable to use wireless systems, including phones and computers.

Moreover, for me there are also both privacy and financial security issues. I never put out personal information on a cell phone or wireless computer.

This is a frightening Pandora's Box - because, once implemented, there would be no way to take it back and protect the growing number of people who could be impacted both by the EMFs and inability to use a phone line.

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Submitter Info:

First Name: Susan

Last Name: Olguin

Mailing Address: 4145 N. Wayside Dr.

City: Saginaw

Country: United States

State or Province: MI

Postal Code: 48603

Organization Name: null

Please do not remove land lines. There are people who depend on them as there only means of voice communication. There are people who have electromagnetic sensitivities. Also, don't you think it should be determined how disruptive wireless technology is to our bodies and to other living systems on our planet before we totally get rid of a system that works for all.

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Submitter Info:

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Last Name: Drake

Mailing Address: P. O. Box 9170

City: Ft. Mohave

Country: United States

State or Province: AZ

Postal Code: 86427

Organization Name: null

For the last 10 years I have had severe Environmental, Chemical and Electrical disabilities and have been being treated by a physician for these conditions.

I am registering my strong objections to the proposed elimination of land lines in the U.S. The land line technology is the only link I have to the outside world, as my conditions make it impossible for me to be around cellular technology, microwave signals, digital computers, TV's, WI Fi, etc. For 10 years, I have lived in partial seclusion and have relied completely on my land line phone to keep me in touch with the world, contact medical when needed, buy supplies, groceries, medicine and more.

My condition is not to be taken lightly. It has been life threatening over the last 10 years and I have often needed emergency medical care....all obtained with my land phone. If land lines are removed, I will be out of my entire web of providers, friends and family, as I cannot now or in the future be around cellular technology.

This is a bad idea in one other way.....to have all phones be internet driven or cellular, it puts the entire country in jeopardy from cyberspace terrorism. In regional events of satellite interruption, no one could connect with others or obtain help in emergencies who only had cell phones or computers. The only people who were able to place calls were people with land lines.

This should be a priority of National Security as well as protection of people with severe disabilities. Do not take down the land lines, for all of America's sake!

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Submitter Info:

First Name: ANNALEE

Last Name: LAKE

Mailing Address: PO BOX 627

City: INDIAN HILLS

Country: United States

State or Province: CO

Postal Code: 804545

Organization Name: N/A

Please do not discontinue access to land lines and replace with wired and wireless broadband systems. There are many people like myself who are unable to use broadband systems, or even be in an area where they are in use, without becoming very ill.

Individuals with this problem do not have the clout of powerful lobbies, but our health and well being is just as important as the input and pressure from money-backed groups.

I pray you will not adopt this measure which will injure so many.

Thank you and may God guide your decision.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Sarah

Last Name: Jones

Mailing Address: P.O. Box 689

City: Blue Lake

Country: United States

State or Province: CA

Postal Code: 95525

Organization Name: null

THE SWITCHED TELEPHONE NETWORK MUST BE MAINTAINED! I do not want to be forced to use a cellular phone to make calls. I have Multiple Sclerosis and am EMF sensitive. We need a hard wired land line here in rural California because we often have large power outages sometimes for days and weeks. Landlines make communication possible when it would otherwise be impossible. You are not taking into consideration the people that RELY on landlines for basic daily life, including the poor, rural, and elderly and those with EMF sensitivity. It is criminal for you to cut off millions of Californians from their basic means of communication- the land line telephone! It seems to me that the FCC is continually making decisions that promote corporate monopolies and profits and have no regard for the health and well-being of people and the environment. I am continually dismayed by your decisions in which you err on the side of corporations instead of the PUBLIC INTEREST! I believe that the switched telephone network MUST be maintained! We paid for it, leave it alone! I refuse to be forced into giving up my land line! For us rural Californians it is our LIFELINE!

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Jolie

Last Name: Andritzakis

Mailing Address: 5757 Old Redwood Hwy #3

City: Santa Rosa

Country: United States

State or Province: CA

Postal Code: 95403

Organization Name: null

PLEASE DO NOT ELIMINATE THE LANDLINE TELEPHONE SYSTEM. I cannot use any other phone system because of my Electrical Hypersensitivity (EHS). The Architectural and Transportation Barriers Compliance Board ('the Access Board') is the Federal Agency which administers the American with Disabilities Act (ADA). According to the Access Board at least 3% of the population, or almost 10 million Americans are also EHS like me. We cannot use wireless technology and have difficulty using computers. We depend on the switched telephone network for voice communication. We would literally be cut off from voice communication. We are a disabled group of American Citizens protected by the ADA. It is not right for the government to discriminate against us. Children also use landlines as do almost all seniors. Cell phones, portable e-phones and wireless broadband are dangerous to children and seniors too. Other countries have made cell phone use illegal for children.

We do not want our phone system changed to broadband. We do not want to be exposed to even more Radio Frequency from more broadband. WE WANT YOU TO PROTECT US NOT MAKE US SICKER! Already our lives are quite small due to the technology that is getting worse everyday. Technology which makes us sick. Many of us live as environmental refugees only able to make contact by pay phone land lines. Others live on the edge of cities away from the largest concentration of Radio Frequency, and navigate their lives around the technology, stay away from cell phones, cell towers and all wireless devices. PLEASE DON'T MAKE OUR LIVES WORSE!

Eliminating landlines will leave millions of Americans without even basic phone service.

Instead of eliminating land lines you should study the EHS, and the non-thermal effects of Radio Frequency. Please use the Precautionary Principle like older nations.

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Submitter Info:

First Name: Abe

Last Name: Siemens

Mailing Address: P.O. Box 374

City: Rancho Mirage

Country: United States

State or Province: CA

Postal Code: 92270

Organization Name: null

Re: FCC (Document ID FCC-2011-0078-0001)
Land Lines Elimination Proposal by AT&T

Date: April 18, 2011

I am strongly opposed to plans by AT&T to eliminate land lines. The existing land line infrastructure offers privacy, reliability, and freedom from health risks. As a business owner, I make numerous conference calls and send numerous fax messages. How will the new AT&T plan meet those needs?

Wireless communication also appears to pose significant health risks. The AT&T plan should not be implemented. The existing system works well; don't fix it.

Abe Siemens

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Kristina

Last Name: Sundstrom

Mailing Address: 216 E Franklin Street

City: Hancock

Country: United States

State or Province: MI

Postal Code: 49930

Organization Name: null

Please continue to maintain the analog circuit-switched telephone network, our system of traditional landlines. This system continues to play an important role in U.S. communications, including during times of emergency. In addition, it is the only telecommunications system that many electrically sensitive people are physically able to use. Estimates suggest there could be 10 million Americans affected by such electrical sensitivities. Traditional landlines must be maintained to continue providing truly universal phone service.

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Submitter Info:

First Name: Valarie

Last Name: Morris

Mailing Address: 144 Alamo Drive

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87501

Organization Name: null

See attached file(s)

April 12, 2011

Comment to FCC (FCC-2011-0078-0001)

It is very important to keep landlines. These are the only lines I want to use. I have one cell phone for emergency use only. I only want my daughter and my granddaughter to use landlines. Cell phones are dangerous; they cause health and safety problems.

This is a very serious matter. As a federal agency, you are supposed to support the rights of the people, not look out for your own financial profits. Do NOT eliminate landlines by any means! Do NOT phase them out with your new focus on financial gain with fixed and wireless broadband! Do NOT try to trick or deceive the public by burying information of primary importance, like eliminating landlines, in lengthy documents. Think of your own grandchildren. Take a long-term perspective to protect the health and safety of U.S. citizens.

Do NOT eliminate subsidies for ordinary or switched telephone services! It is shocking to imagine that you are even thinking of such a thing. Do NOT eliminate the Universal Service Fund to create a fund that serves the monied, corporate interests. Their CEOs are already making much more than anyone else in this country.

The switched telephone network must be maintained!

Thank you for seriously considering my requests. Do NOT eliminate landlines. I and my family depend on them for our communications. They are much safer than cell phones.

Valarie Morris
Citizen of the U.S.

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Submitter Info:

First Name: Nina

Last Name: Zelevansky

Mailing Address: PO Box 23079

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87502

Organization Name: null

As a medical professional and individual with EMF sensitivities, I am deeply concerned about proposed ending of LandLines. This would leave many individuals who are negatively affected by Wireless/Cell Phone Technology in drastic and unsafe isolation.

Many sensitive people are often homebound due to illness, and reliant on their LandLine Phones for contact with friends and medical help. What would become of their lives with inability to have a source for communicating via a phone or non-wireless computer?

As well, many of these individuals live on fixed incomes or live in rural areas, where access to a Land Line is truly an issue of safety.

I urge you to be aware of the Americans With Disabilities Act, the needs of those that are already feeling alone and isolated in many ways, and maintain the reasonable requirements they have in the choice to maintain contact via Land Line Phones.

Too little is truly known about the potential consequences of Wireless Technology. Many of us that now have negative health effects from it may indeed be the "canary's in the mine" for future generations.

Please, let's be aware of those with special needs and be smart about our decisions for the future, before it's too late.

Sincerely,

Nina Zelevansky, M.A., LPCC

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Submitter Info:

First Name: tom

Last Name: ashley

Mailing Address: 2907 applying cir

City: atlanta

Country: United States

State or Province: GA

Postal Code: 30341

Organization Name: null

I dont like using my cell phone for all my calls. Wireless is convenient but we should have the right to not use it for every call. It can cause health issues

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Submitter Info:

First Name: Sally

Last Name: Blakemore

Mailing Address: 3012 Siringo Rondo South

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87507

Organization Name: null

As in pharmaceutical research, regulations on the amount of time drugs are tested before being introduced to the consumer should be applied here. There is a lot of research about these devices and what they do to a soft human tissue and young infant's brain tissue and the results are the evidence of harm. The density of towers produced in competing for customers is just stupid, thoughtless clutter. Visual blight and high frequency aliases formed from all the intersecting wave lengths cause many health problems in humans.

I don't think the FCC should have any power over a local government and the protection of its citizens.

We need a 5 year moratorium, I feel, before we allow this obsolescent clutter, abandoned towers, phony trees in the landscape and pathetic by product of techno-gadget consumerism to terrorize and complicate our lives.

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Submitter Info:

First Name: Frank

Last Name: Ferris

Mailing Address: 675 Robinson Road

City: Sebastopol

Country: United States

State or Province: CA

Postal Code: 95472

Organization Name: individual

I oppose ATT's intention to discourage and eliminate land-line service for telephone customers. My landline service is my choice. I do not trust the safety of electronic waves emitted by cell phones, and am familiar and content with my landline service. I do not wish to acquire a cell phone and service. FCC please act to protect those of us who prefer this infrastructure which is already in place.

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Submitter Info:

First Name: Pam

Last Name: Jaffke

Mailing Address: Box 283, 206 E Fourth St

City: Owen

Country: United States

State or Province: WI

Postal Code: 54460

Organization Name: null

I am writing to request that you do NOT get rid of landline phones. They have been proven to be safe, reliable, secure and affordable. People need to have a low income choice for their phone needs and landlines serve an important purpose.

Cell phones have numerous problems:

1. Health concerns. After even just moderate use, I have developed numerous lumps around the ear where I hold the phone. I have not yet had any tests to see if cancer is developing in my brain.

2. Coverage is iffy at best in many places. To increase the coverage, numerous towers will have to be erected, which will greatly increase our exposure to electromagnetic pollution. This will lead to further health concerns above and beyond discussed in point #1.

3. I own a business that depends on landlines for the rollover line and fax.

Having only cell phones will severely and I mean severely impact my business. This is not the time to make life more miserable for businesses. Mine is not a large business, how about a very large corporation?

I believe this decision has not be thoroughly evaluated in terms of all its possible consequences. Now is not the time to make any rash decisions.

Sincerely,

Pamela Jaffke DVM

Submitter Info.txt

Please Do Not Reply To This Email.

Public Comments on Developing an Unified Inter-carrier Compensation: =====

Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Terry

Last Name: Schenk

Mailing Address: 2050 ruby Lane No. 1

City: Fairfield

Country: Angola

State or Province: Iowa

Postal Code: 52556

Organization Name: null

I am opposed to eliminating the
landline telephone system and replacing it with a wired and wireless broadband
system. This is a serious problem for those who can't tolerate wireless tools or
devices that use wired broadband and there is a growing number of us. Ironically,
one of the primary targets of the proposed effort is remote rural areas - just the
places that many people need to live in order to reduce exposures of various types.

Please stop this action.

Submitter Info.txt

Please Do Not Reply To This Email.

Public Comments on Developing an Unified Inter-carrier Compensation: =====

Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: jim

Last Name: boswell

Mailing Address: 706 grindle brothers rd

City: murrayville

Country: United States

State or Province: GA

Postal Code: 30564

Organization Name: null

This is a very, very, very bad idea! Millions of people have a sensitivity to cell phone radiation and other wireless technology. Thousands and thousands have an extreme sensitivity (including myself). If landline phones are done away with I and many of my friends will not be able to use a phone at all. What a sad result that would be for so called "progress"!

PLEASE, PLEASE, PLEASE DO NOT DO IT!!!

Submitter Info.txt

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Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: sara

Last Name: moore-hines

Mailing Address: riverview ave

City: DREXEL HILL

Country: United States

State or Province: PA

Postal Code: 19026

Organization Name: null

People w/disabilities need landline phones.

Also, as an independent business woman, I do not want to be exposed to constant radiation from my cell phone and computer when I talk with counseling clients. I use my landline for safe business calls 95% of the time.

Thank you.

Sara Moore-Hines,

Professional Counselor

Pa.

Submitter Info.txt

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Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: E.

Last Name: Willey

Mailing Address: 3665 50th Ave. NE

City: Seattle

Country: United States

State or Province: WA

Postal Code: 98105

Organization Name: null

Do not eliminate land line phones. As a health professional working with people with Multiple Chemical Sensitivities, I can tell you that many of those suffering are unable to speak on a cellular phone. Land line phones are their only means of communication. This is a health and safety issue.

Submitter Info.txt

Please Do Not Reply To This Email.

Public Comments on Developing an Unified Intercarrier Compensation: =====

Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Garri I

Last Name: Page

Mailing Address: 70 Fawn Drive

City: San Anselmo

Country: United States

State or Province: CA

Postal Code: 94960

Organization Name: Obility Seminars

I am 70 years old, have health issues and depend on my landline for telephone service. If FCC forces me to use broadband I will HAVE NO TELEPHONE. There are 10 million of us who depend on landlines. That is a class of 10 million who are adversely affected by this indecent proposal.

I am a citizen, I pay taxes, and I am outraged at this attempt to deny my right to safe and reliable telephone service. I want to know by what legal shenanigans the FCC is able to turn me invisible with no identity and no rights!

In case of a disaster, or even a bad storm, landlines work. Broadband does not. Why Does FCC need to harm citizens in order to prove this is true?

This Proposed Rule is poorly thought-out, unjust, and obviously based on profit over people. Shame!

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Ann

Last Name: McCampbell

Mailing Address: 11 Esquila Rd

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87508

Organization Name: Multiple Chemical Sensitivities Task Force of NM

I, and many others, are dependent on landlines for our phone service. Due to health reasons, many of us must avoid or limit use of cell phones and computers.

I am a physician and work at home doing phone consultations for people with chemical sensitivities.

I must use a landline for this. Thus, my livelihood is dependent on continued access to a landline.

I oppose any and all actions moving towards eliminating landlines. I believe anyone who wants a landline should be able to have one.

For some, this may be pure preference, for others it is a much more serious matter of needing an accommodation for a disability that prevents them from using cell phones and computers.

Ann McCampbell, MD

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Cheryl

Last Name: Cupp

Mailing Address: 202 Laurel St. Apt A

City: Waukee

Country: United States

State or Province: IA

Postal Code: 50263

Organization Name: null

In my opinion, the switched telephone network must be maintained. The Architectural and Transportation Barriers Compliance Board ("the Access Board"), is the federal agency that administers the Americans with Disabilities Act. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities (www.access-board.gov/research/ieq/intro.cfm). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: LORNA

Last Name: MOFFAT

Mailing Address: PO BOX 545

City: MONTEREY

Country: United States

State or Province: CA

Postal Code: 93942

Organization Name: Meet America TV series Ch. 24, Monterey, Calif

Dear Human I am very sensitive to cell phones and go to extreme lengths not to use them whenever possible.

I used a cell phone for five years, approx. 1000 mins per month. I used a long extension cord attached to head phones so I could stand away from the microwaves as much as possible.

After five years I noticed my hearing was diminished, my memory for names and faces disappearing and strange ear noises especially at night.

Luckily a friend of mine alerted me to the fact it might be my cell phone useage.

I didn't want to believe it because I LOVE my cell phone but the symptoms were worsening and finally I decided to give it up for a month and see if my symptoms diminished which they did.

I depend on my land lines for communications as well as internet which cause the same problems.

Dr. George Carlo wrote a book about cell phones and the harm they caused after his extensive studies done on the effects of these technologies.

In his book he forewarns us as to the corruption within that dilutes all science that criticizes these technologies.

I don't hold much faith in the integrity of our country or people in positions of power that make the final decisions as to whether or not the people and yourself and loved ones will continue to have choice regarding the use of cell phones or landlines but I put my comments in anyway for the record.

Maybe, one day there will be a judge who is also sensitive to these microwaves and ELFS and we as a people can file a massive lawsuit against the criminals who force these technologies upon us without any humanity at all.

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: david

Last Name: calvin

Mailing Address: pob 1431

City: Goldendale

Country: United States

State or Province: WA

Postal Code: 98620

Organization Name: personal

I object strongly to eliminating land lines. Not only should money supporting landlines stay with supporting landlines and not supporting satellite communications. The companies that have invented and sell cell phone service and equipment should pay for the use and expansion, not us. It is also shown that the new technology related to cell phones is producing a toxic use situation. Also, there is no way that I could use cell phone service out here in urban America. It has already been shown that the cost to me would be something I could not afford being an elderly person living just on social security. My land line allows me to use the internet as well as phone service including long distance at a reasonable cost. The land lines are also more reliable than the whole cell phone establishment. The government (FCC) should not be allowed to dictate taking away our landline use.

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Deb

Last Name: Cohn

Mailing Address: PO Box 3432

City: Taos

Country: United States

State or Province: NM

Postal Code: 87571

Organization Name: null

I believe the switched telephone network must be maintained. The Architectural and Transportation Barriers Compliance Board ("the Access Board"), is the federal agency that administers the Americans with Disabilities Act. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities (www.access-board.gov/research/ieq/intro.cfm). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Linda

Last Name: Jacobson

Mailing Address: 8424 Thunderhead Drive

City: Boulder

Country: United States

State or Province: CO

Postal Code: 80302

Organization Name: null

I'm confused that you are considering this rule. Every time I become convinced that cell phones are harmless, I read of a new study that shows they are not.

This change, once done, can't be undone. The network of landlines took a long time and a lot of money to establish. It is essential that we preserve them, in case it is determined that cell phones are dangerous.

Currently, I have Comcast as my carrier. Although the modem is supposed to have a battery life of 8 hours, whenever the electricity goes out, I lose my phone. A cell phone needs electricity to recharge. As energy becomes more expensive, brownouts will become more common. This change will make people dependent on electricity for communication.

Please do not approve this change.

Thank you.

Sincerely,

Linda Jacobson

Submitter Info.txt

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Paul

Last Name: Maurer

Mailing Address: 735 St. Louis St.

City: Ferndale

Country: United States

State or Province: MI

Postal Code: 48220

Organization Name: null

The switched telephone network must be maintained. The Architectural and Transportation Barriers Compliance Board ("the Access Board"), is the federal agency that administers the Americans with Disabilities Act. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities (www.access-board.gov/research/ieq/intro.cfm). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

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Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: William

Last Name: White

Mailing Address: 2351 E. Hill Rd.

City: Willits

Country: United States

State or Province: CA

Postal Code: 95490

Organization Name: null

I can not allow any wireless directed at my residence.
We have a family member who is electrically sensitive
as are some 3% of the population according to independent
scientific research both here and abroad. Also, even though
the electromagnetic radiation is perhaps of minimal strength
to impact most of us, it is a danger because of the permanent
nature of it. Please look into the health concerns of this
put forth by independent scientists.

Thank You,

William White

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Joseph

Last Name: Di Gennaro

Mailing Address: 8 Robert Road

City: Bayville

Country: United States

State or Province: NY

Postal Code: 11709

Organization Name: null

As a regulatory agency you have stated that you do not have the expertise to determine safety standards for exposure to radiofrequency (RF) radiation. No government agency studies the biological effects of continuous exposure to RF radiation from wireless devices and antennas. The FCC's new proposal fails to outline how wireless infrastructure will be monitored and regulated. It relies entirely on voluntary compliance from the telecom industry.

Citizens have the right to choose a landline phone. We have the right to opt out of wireless devices. If your proposal passes, we will be denied the right to choose a landline.

Please do not replace existing landlines with wireless infrastructure until it is proven safe, secure, reliable and affordable!

Landlines are safe.

Landlines are secure. Cabled phones ensure privacy.

Using mobile phones makes us vulnerable to hackers who commit financial fraud. It makes us vulnerable to terrorists.

Landlines are reliable.

During power outages and natural disasters, landlines are dependable.

Landlines are affordable.

We already have the infrastructure for landlines.

Mobile phones fees are unregulated.

Mobile phones and computers need constant repair, upgrades and replacement. Seniors and low-income citizens can't afford this. Equipment for landlines is durable and economical.

Landlines are easy to use.

Landlines are Green.

*** The FCC has the duty to facilitate communications for all citizens.

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Howard

Last Name: Bleicher, D.D.S.

Mailing Address: 127 E. Alicante Road

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87505

Organization Name: null

According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities (<http://www.access-board.gov/research/ieq/intro.cfm>). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

Also doing away with land lines will mean a mega increase in cell tower low dose radiation which will increase the cancer clusters around cell towers and effect children so much more as their skulls are thinner and their rapidly developing brains will demonstrate more malignant brain tumors.

This idea can only be the pet idea of the telecom industry, since they will not have the expense of landline maintenance.

The FCC is obligated to study all available literature on the health effects of cell tower low dose radiation before allowing this catastrophic change!!

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Natasha

Last Name: Torres

Mailing Address: P.o. Box 31284

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87501

Organization Name: none

I am very upset to learn that the FCC is proposing to eliminate landline telephones because it is the only type of telephone I can use due to electromagnetic sensitivities. Please maintain the switched telephone network.

It has also come to my attention that the Universal Service Fund which is used to subsidize telephone service in rural areas, as well as for low income individuals would be allocated to pay for fixed and wireless broadband instead of the above. Since I come from a state which has a large rural population, and several low income people, they would be left without basic phone line service

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Lisa

Last Name: Tener

Mailing Address: 101 waterway drive

City: saunderstown

Country: United States

State or Province: RI

Postal Code: 02874

Organization Name: null

New research continues to show the damaging results of cell phone usage. It is always ALWAYS recommended that children do not use cell phones do to the fact that they are especially damaging to children.

We must keep land lines a viable resource for children, families and anyone concerned about the dangers (which are getting more and more data) of cell phone usage.

Computers also have radiation and other negative effects. Land lines are the safest way to make a call. Keep this network viable!

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Vance

Last Name: Johnson

Mailing Address: 305 South Beech Street

City: Appleton City

Country: United States

State or Province: MO

Postal Code: 64724

Organization Name: null

For the sake of the over 10 million people who suffer from electromagnetic sensitivities, do NOT allow the elimination of landline telephones. Please maintain the existence of the switched telephone network!!!
Thank you.

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: David and Ellen

Last Name: Drell

Mailing Address: 6150 Hearst-Willits Road

City: Willits

Country: United States

State or Province: CA

Postal Code: 95490

Organization Name: null

It is critical to us that the switched telephone network be maintained. We live in a rural area and wireless phone service, even if we wanted it, provides very poor quality service, with many of the calls to us from cell phone users completely impossible to understand because of the complex mountainous terrain. When we have a power failure or any other kind of emergency, we depend on the switched phone service to stay in contact with our neighbors. We do not want to depend on any kind of wireless communication devices, since we are convinced that the increasing exposure to RF radiation is causing a rising tide of negative biological and health effects which is being disproportionately borne by electromagnetically sensitive people and organisms. Please do not take away the opportunity for those of us who wish to avoid RF radiation to have a landline phone and avoid having to use wireless devices or computers to remain in contact with businesses, friends and neighbors.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Karla

Last Name: Milosevich

Mailing Address: 433 Capp St

City: San Francisco

Country: United States

State or Province: CA

Postal Code: 94110

Organization Name: null

Hello,

I use a landline to avoid excessive cell and handheld usage for me and my daughter. Cell technology is so new and landlines are proven safe, so please let us keep our landline for longer conversations with family etc.

Thank you for your time and consideration.

Karla

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Cynthia

Last Name: Louis

Mailing Address: 551 Cordova Rd. #112

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87505

Organization Name: null

I have been told that you may be taking some first steps toward eliminating landlines for phone and internet. I do not want you to do this. I much prefer landlines to wireless. There is a huge amount of evidence that wireless is harmful. I get a very unpleasant, congested and full feeling in my brain when I am near it, and especially if I have to use it. I do not think it is at all fair to take away people's options and force them to use something they do not want.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Leanda

Last Name: Carr

Mailing Address: 4135 E Aztec Rdg

City: Rimrock

Country: United States

State or Province: AZ

Postal Code: 86335

Organization Name: null

I feel better when I DO NOT USE A CELL PHONE OR ANYTHING WIRELESS!!!

I use a land line 99.9% of the time.

There are many negative health consequences from exposure to electromagnetic frequencies and other varieties of ELECTROSMOG despite inaccurate/biased information to the contrary.

The choice for me to have a land line SHOULD NOT BE REMOVED!!!!

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Donald

Last Name: Levesque

Mailing Address: 2130 Pearl Ln #2

City: Fairfield

Country: United States

State or Province: IA

Postal Code: 52556

Organization Name: null

This would be terrible for people who are extra sensitive to electromagnetic fields.
It may not even be good for anyone's health at all!

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Maria

Last Name: Chilton

Mailing Address: PO Box 512

City: Dixon

Country: United States

State or Province: NM

Postal Code: 87527

Organization Name: null

Please do not do away with land lines! I believe cellular technology is potentially very harmful to human beings especially children and babies. We must maintain the option of having land lines.

Submitter Info.txt

Please Do Not Reply To This Email.

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Lisa

Last Name: Weinstein

Mailing Address: 1639 Ramona Ct.

City: Ripon

Country: United States

State or Province: CA

Postal Code: 95366

Organization Name: null

Wireless technologies emit radio frequencies which scientific evidence has proven cause harmful biological effects on all living organisms. Landlines must be kept as the only truly democratic option for telephone service to electronically sensitive individuals or those not wanting to expose themselves to the harmful biologically active radio frequencies.

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Elisabeth

Last Name: Bucy

Mailing Address: 2007 Hopi Rd.

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87505

Organization Name: null

I can't believe they are considering doing away with land lines. This is pure stupidity. It's a known fact that microwaves are not good for humans, bees, cows, chickadees.. Please stop being so stupid!!! You cannot eat money, so drop the greed, ya honey!

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Cheryl

Last Name: Sittle

Mailing Address: 47A Church Street

City: Norwich

Country: United States

State or Province: VT

Postal Code: 05055

Organization Name: null

It would be extremely disappointing if the option using a landline telephone was taken away. I have not yet owned a cell phone for a few reasons. Two reasons are the cost and the radiation. Having the freedom to utilize any or all options of communications seems essential given the wide range of circumstances and situations for the citizens of the United States. It would create definite problems for many if this proposal were enacted. In short...NO to eliminating landlines. Thank you.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Carole

Last Name: Jones

Mailing Address: 40 Vineyard Circle

City: Sonoma

Country: United States

State or Province: CA

Postal Code: 95476

Organization Name: null

As one who is extremely sensitive to electromagnetic fields, I am deeply opposed to eliminating landline phone service. Cell phones have increasingly been linked to brain tumors in various studies, and are physically painful to use for those of us who are sensitive to them, causing migraines, ear aches, irregular heartbeat, etc. In times of power outages (storms sometimes cause widespread outages that can last a week or more), cell phones are not a reliable means of communication, as they need to be recharged electrically.

Submitter Info.txt

Please Do Not Reply To This Email.

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: John Craig

Last Name: McEwan

Mailing Address: 11347 North Eagle Ridge Trail

City: Portal

Country: United States

State or Province: AZ

Postal Code: 85632

Organization Name: null

I have terrible electrical sensitivities. Cell phones cause me excruciating pain. I wholeheartedly urge you to maintain the switched telephone network.

Submitter Info

Please Do Not Reply To This Email.

Public Comments on Developing an Unified Intercarrier Compensation: =====

Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: DAVID

Last Name: SIDDIQUI

Mailing Address: 694 BARTLETT AVE

City: HAYWARD

Country: United States

State or Province: CA

Postal Code: 94541

Organization Name: null

Hello,

I would like to respectfully submit that I am vehemently opposed to the elimination of landline telephone service. Although the popularity of mobile phones has reduced the demand for such services, demand still exists and there are a number of strong reasons to keep the service active for those who wish to use it.

First, landline telephone service is unmatched in its stability for emergency communications. Since these services provide power to phones through the phone lines and usually have backup power as part of the system to keep services running, it allows a vital form of communication during an emergency, especially when electric services are disrupted or bandwidth limits are exceeded on mobile phone networks as large numbers of people try to use the network at once.

Second, the long term safety of mobile phones has not been demonstrated, and many people choose to use land lines as a precaution to avoid extra exposure to electromagnetic radiation. For people who are extremely sensitive, or for people who choose to limit their exposure, landline communications are an extremely valuable service.

Third, the quality of the audio and stability of the connection of landline services far surpasses any mobile communications network. This makes landline services valuable for broadcast applications and other specialty applications where these issues are important.

There is absolutely no need to eliminate this valuable existing infrastructure, and I strongly oppose any move to eliminate landline telephone services.

Sincerely,

David Siddiqui

Submitter Info.txt

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Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Raymond

Last Name: Singer

Mailing Address: 36 Alondra Road

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87508

Organization Name: null

I oppose further implementation of wireless communication equipment until all of the health risks, including non-thermal effects, are fully elucidated and prevented. Please review the numerous available epidemiological and cross-cultural studies, as well as over 50 experimental studies over the last 50 years, showing ill effects of microwave communication radiation.

It is a poor design which allows electrical interference in the human system from microwave communication equipment.

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Allison

Last Name: Panelli

Mailing Address: 1921 Bellevue Drive

City: Glendale

Country: United States

State or Province: CA

Postal Code: 91201

Organization Name: null

To whom it may concern:

The switched telephone network must be maintained. Due to smart meter installation, I am now electrosensitive for the first time in my life. I need to stay away from cell phones, as well as other devices that emit electromagnetic frequencies, because I get horrible, throbbing headaches, when I am exposed to these devices. I need to use landline telephones in order to stay in contact with others.

Thank you,

Allison Panelli

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Nicole

Last Name: Crosby

Mailing Address: 91 Valleywood Rd.

City: Cos Cob

Country: United States

State or Province: CT

Postal Code: 06807

Organization Name: null

In the strongest terms, I urge the FCC to ensure that landline phones are available to every household and business. My family only uses landline phones at home; landline is the only safest, most reliable phone available, and in an emergency situation, I must be able to rely on it.

Furthermore, the resulting increase in reliance on cell phones (if landlines phones are not available) will cause an even greater problem with cell tower placement in residential neighborhoods around the country. My town is already battling tower placements, and a newly planned 150' cell tower will destroy property values in that neighborhood and the surrounding area. Citizens are overwhelmingly opposed to more cell towers - especially here in Connecticut where a state siting council takes away what little control we have over tower placement.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Shari

Last Name: Withrow

Mailing Address: PO Box 1661

City: Aledo

Country: United States

State or Province: TX

Postal Code: 76008

Organization Name: null

The switched telephone network must be maintained. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities (www.access-board.gov/research/ieq/intro.cfm). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

Do not opt out on health issues! It is imperative that we keep landline phones!!!!

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Ric

Last Name: Bernat

Mailing Address: 4004 NE Failing St.

City: Portland

Country: United States

State or Province: OR

Postal Code: 97212

Organization Name: null

I feel that any broadband infrastructure build-out should use wired technologies only -- ideally fiber-optic cable where possible. Wireless technology should not be employed to provide broadband Internet access to any fixed structure (i.e., home or business). Wireless access is not suitable for fixed-structure broadband access because it is a relatively low-bandwidth technology (far slower than fiber-optic broadband) that will soon be outdated, meaning that investments made in wireless now will be wasted. Further, there are emerging health concerns about the RF radiation emitted by wireless technology, and until this technology is proven safe (no conclusive proof that it is safe has yet been published) we should not deploy it.

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Submitter Info:

First Name: Kim

Last Name: Travis

Mailing Address: 12828 FM1696 Rd

City: Bedias

Country: United States

State or Province: TX

Postal Code: 77831

Organization Name: null

To Whom it May Concern,

I understand you would like to eliminate all land lines for communications. Please do not do this. Cell phones give me migraine headaches. I can not shop in stores that have Wifi, or visit where Wifi is. Your move will make the problem all that much worse. Also, the cost of wireless service is considerably higher, especially for those of us in the rural areas. I love my land line telephone. I love my broadband internet over my telephone line. I can use it without the headaches.

My husband and I are American citizens, we believe we have a right to live in a manner that does not impend on our health. We are also self employed small farmers, very dependent on the internet. If you take away our land lines, you will seriously impede our ability to make our living. It will run up our health care costs as well. I ask, what did we do to deserve this kind of punishment?

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Karin

Last Name: Menzer

Mailing Address: W7604

City: Plymouth

Country: United States

State or Province: WI

Postal Code: 53073

Organization Name: null

Please do not phase out land-line telephone service. Many people still do not have or want cell phones, and some can not safely use them.

Land line phone service is still the most secure form of phone service and should continue to be available and affordable.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Fern

Last Name: McEwan

Mailing Address: 11715 NW 800 Road

City: Appleton City

Country: United States

State or Province: MO

Postal Code: 64724

Organization Name: null

Do not allow the elimination of landline telephones! Cell phones emit electromagnetic impulses that many people cannot tolerate. To me, doing so would go against The Americans with Disabilities Act, since people with electromagnetic sensitivities have a disability, and requiring them to use cell phones is wrong.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Barbara

Last Name: Schnier

Mailing Address: 14575 Flathead Rd.

City: Apple Valley

Country: United States

State or Province: CA

Postal Code: 92307

Organization Name: Barbara Schnier Esq.

Proposed Rule Making (NPRM) D=FCC-2011-0078-0001

Dear Rulemaking:

I strongly object to the proposal to eliminate landlines. There are millions of citizens that are unable to use cell phones who depend on landlines to communicate.

Elimination of landlines is ill advised especially in light of volumes of recent research showing biological damage from emissions from towers and cell phones. (see Bioinitiative at www.bioinitiative.org and many recent studies cited in the attached letter.

This action would violate these citizens constitutional rights and would also violate the Americans With Disabilities Act by effectively prohibiting access to these citizens to communications.

Please see proclamations of Governors recognizing these Americans, tetimony given by experts and citizens to the Department of Justice January 18, 2011 on the topic and my letter with cites attached supporting this comment.

Please start looking at the recent research not vintage research that helps the industry attempt to avoid an "inconenient truth". The taxpayers of the country pay your salaries and we would appreciate a modicum of consideration to our health and wishes in this matter!

Sincerely , Barbara E. Schnier, Esq (113809 disabled inactive)

Honorary Proclamation



BILL RITTER, JR.
GOVERNOR

ELECTROMAGNETIC SENSITIVITY AWARENESS MONTH *May 2009*

WHEREAS, people of all ages in Colorado and throughout the world have developed the illness of Electromagnetic Sensitivity (EMS) as a result of global electromagnetic pollution; and

WHEREAS, Electromagnetic Sensitivity is a painful chronic illness of hypersensitive reactions to electromagnetic radiations for which there is no known cure; and

WHEREAS, the symptoms of EMS include, dermal changes, acute numbness and tingling, dermatitis, flushing, headaches, arrhythmia, muscular weakness, tinnitus, malaise, gastric problems, nausea, visual disturbances, severe neurological, respiratory, speech problems, and numerous other physiological symptoms; and

WHEREAS, Electromagnetic Sensitivity is recognized by the Americans with Disabilities Act, the US Access Board and numerous commissions; and

WHEREAS, this illness may be preventable through the reduction or avoidance of electromagnetic radiations, in both indoor and outdoor environments and by conducting further scientific research;

Therefore, I, Bill Ritter, Jr., Governor of Colorado, do hereby proclaim May 2009

ELECTROMAGNETIC SENSITIVITY AWARENESS MONTH

in the State of Colorado.



*GIVEN under my hand and the
Executive Seal of the State of
Colorado, this fifteenth day of May,
2009*

Bill Ritter Jr.

Bill Ritter, Jr.
Governor

FLORIDA GOVERNOR PROCLAIMS MAY 2009 AS ELECTROMAGNETIC SENSITIVITY (EMS) AWARENESS MONTH

Christiane Tourtet B.A.

April 28, 2009

Florida Governor Charlie Crist signed a proclamation declaring May 2009 as Electromagnetic Sensitivity (EMS) Awareness Month in Florida. As stated in the proclamation, people in Florida and throughout the world have developed Electromagnetic Sensitivity (EMS) as a result of global electromagnetic pollution.

Electromagnetic Sensitivity is a painful chronic illness of hypersensitivities reactions to electromagnetic radiations for which there is no known cure. The symptoms of EMS include dermal changes, acute numbness and tingling, dermatitis, flushing, headaches, arrhythmia, muscular weakness, tinnitus, malaise, gastric problems, nausea, visual disturbances, severe neurological, respiratory, speech problems and numerous other physiological symptoms.

The Governor also states that Electromagnetic Sensitivity (EMS) is recognized by the Americans with Disabilities Act and the U.S. Access Board and that the health of the general population is at risk from electromagnetic exposures that can lead to this illness induced by electromagnetic radiations, and that this illness may be preventable through the reduction or avoidance of electromagnetic radiations in both indoor and outdoor environments and by conducting further scientific research, and that people with EMS need the support of the Medical Establishment, understanding of family, friends, co-workers, and society as they struggle with their illness and have to adapt to new lifestyles.

[For additional information on Electromagnetic Sensitivity \(EMS\) and to view the Proclamation signed by Florida Governor Charlie Crist, please visit the website:](#)



Transcript of January 10, 2011 Public Hearing on Advance Notices of Proposed Rulemakings

San Francisco, CA

9:30 AM PST

This text is being provided in a rough draft format. This transcription is provided in order to facilitate communication accessibility and may not be a totally verbatim record of the proceedings.

>> SARA WINSLOW: Good morning, everyone. I'm Sara Winslow deputy chief of the Civil Division at the U.S. Attorney office of the northern districts of California. I want to welcome you all here on behalf of U.S. Attorney Melinda Hague.

One of the many things that we do at the civil division of the U.S. Attorney's office is to work with the Department of Justice's Civil Rights Division, to help enforce civil rights laws such as the Americans with Disabilities Act.

We do that throughout the Northern District of California, which contains the coastal counties from Monterey and the south up to the border with Oregon in the north. And we are very happy that the Department Civil Rights Division is here in San Francisco today to receive comments from our community regarding proposed new rules to implement the ADA in the 21st century.

We would like to thank the Civil Rights Division and all of you who came here today. It's very important to hear from each and every one of you who wants to give comments, get your thoughts and your input on the proposed rules. So, we thank you very much for your participation, and we wish you a very productive hearing today. With that, I will turn it over to Mazen Basrawi from the Civil Rights Division.

>> MAZEN BASRAWI: Good morning, everyone. My name is Mazen Basrawi. I'm

Counsel to the Assistant Attorney General Tom Perez. On behalf of Assistant Attorney General Perez, I'd like to welcome you to our third and final hearing on our Advance Notices of Proposed Rulemaking.

Now, before we begin, the President has asked us to observe a moment of silence in memory of those who were killed this weekend in Arizona. So, we would like to do that at this time. (Pause)

Thank you. This morning, and throughout the day, we will be hearing from members of the public on our advanced notices of proposed rulemaking in the area of Internet websites, captioning and audio description in movies, next generation 911, and equipment and furniture.

And for those who have been following our very productive hearings in Chicago and Washington, D.C., we have gotten very helpful and very important comments throughout the public. From people with disabilities, organizations representing people with disabilities and advocates, representatives of industry, members of public entities, and a variety of others who have provided us with valuable feedback in order for us to take the next steps in producing regulations in these areas.

I don't want to take up much time this morning, since we have a very full schedule for the day. We ask that everyone proceed as efficiently as possible, given that we have a remarkable number of individuals, more than in both Chicago and Washington, D.C.

And now, I would like to turn to our presiding officer in this hearing, Acting Deputy Assistant Attorney General, Mr. John Wodatch, who has served as the Chief of the Disability Rights Section since its founding 20 years ago. And who brings a tremendous amount of wealth, of experience, and wisdom to this process, and will be our presiding officer for the day. So, John?

>> JOHN WODATCH: Thank you, Mazen. Good morning, everyone. We are delighted to be here and to see so many of you here with us in the audience. We'll try and move this hearing along as expeditiously as possible. We have a full day. People have filled in every slot that we have available.

We ask that when you are testifying that you stay within the five-minute allocation we have. We realize that only gives you the opportunity to hit the highlights of what you would like to tell us. We hope that you will supplement your testimony today with written comments.

You can file written comments with the Department through January 24. If you have them with you today, we will be happy to take them and enter them into the record.

There will be a light. When you are testifying, at the four-minute mark, the green light will turn to a yellow light. And there will be a beep. At the five-minute mark, the yellow light will turn to a red light and there will be another louder beep.

We ask that you stay within those parameters, so that the people who have signed up to testify later in the day can have their opportunity to testify as well.

There are a lot of staff here from the Department of Justice and from other agencies here in the Bay Area. And if you have issues or questions, they are available all around the room, and can assist you.

With that, I think we should just begin. Our first commenter this morning is Wayne Lesser. Mr. Lesser, please proceed.

>> WAYNE LESSER: Good morning. My name is Wayne Lesser. I am a lawyer. I'm a trial lawyer. I've been practicing law for 41 years. I was born with moderate to severe hearing loss, and didn't know it until I reached the Bay Area in the late '60s. I'm also the founder of Lesser Sound which will be the first consumer electronics store for the hearing-impaired.

I am an example of the need for the proposed rulemaking for captioning 100 percent of motion picture theaters now, not over five years, unless the theater or its owner can show cause why it should not be required.

I read the materials and found one of the key words is the undue, quote-unquote, "burden," which in my opinion and perhaps others, would justify not accelerating the process. I believe the term is unduly vague, and it is much like the definition of pornography that you, my fellow counsel, will recognize when Justice Stewart in 1964 said, "I know it when I see it."

Undue burden is just too vague. I would suggest the establish -- the presumption of no undue burden with the administrative proceedings to show cause otherwise.

I believe that all theaters should be covered with the requirement that closed captioning or open captioning be introduced as soon as possible, and not over five years, as there is no showing that the technology is not currently available.

I did a study and I found as you all know that the population of we hearing-impaired are at least 36 million and supposedly increasing by one million per year. Thirty-six million new potential customers to the movie industry would offset any undue burden for the industry, and would increase the ability of

my people, my hearing-impaired people, to enjoy the benefits of what you all enjoy without trouble.

We know that 25 to 30 million people who are hearing-impaired don't wear hearing aids, and need assistive devices but either cannot afford them, or are embarrassed to seek help.

Well, the real cost of compliance with the movie theaters introducing closed captioning can be offset by amortization of the cost, institutional loans and perhaps the sale of hearing glasses to what I call the HIP, hearing-impaired people, to offset the cost.

Finally I'd like to share one personal experience that I didn't find funny, others might. Recently I went to a local theater. I don't go much, neither does my wife, because she knows I have difficulty. That theater to my delight had the audio earphones, and I guess it would be a battery-powered sound augmentation device, which you would be able to adjust the sound for the theater. And I was very happy to see that my local theater did it.

I sat there, and the movie began. And I have the device, which looks like a pack of cigarettes with the earphones on, in my hand. And all of a sudden I said, uh-oh, because sound characters, scenes, change of scenes vary. And I found myself with this little cigarette device with the volume control up and down and around and looking up and every time the characters on the screen would look away, I wasn't able to see or hear what they did.

So even with current technology, even with these little battery packs that the theaters are mandated to carry, it doesn't work for people like me.

I wanted to share this personal experience, because I am really what 36 million other people are all about, except I'm here, they are not. But I speak not just for myself, but for them.

>> JOHN WODATCH: Thank you very much. We appreciate you taking the time and sharing your story with us today.

>> WAYNE LESSER: You're welcome and hopefully it will work and it will work for all of us.

>> JOHN WODATCH: Thank you. I'd like to also introduce the other members of the panel. You obviously met Mazen Basrawi, Counsel to the Assistant Attorney General. We are also joined on the panel, on my far right, by Kathy Devine, who is senior attorney in the Disability Rights Section in the Civil Rights Division, and Sarah DeCosse, who is a senior attorney in the Disability Rights Section, both of whom have responsibilities in the area

of developing regulations. I believe our next commenter is going to be by phone, and it's Susan Brinchman.

>> SUSAN BRINCHMAN: Thank you. My name is Susan Brinchman and I reside in La Mesa, California. I'm the director of a national educational 501(C)(iii) nonprofit, the Center for School Mold Help. And my comment is directed with regard to nondiscrimination pertaining to equipment and furniture although there may be some broader applications to what I say for ADA.

I have struggled to live with environmental disabilities for over the past ten years. My suggestions are based on personal experience, communicating with thousands of individuals with these disabilities over the past six-and-a-half years, speaking with experts in the area including doctors and scientists, my own physician recommendations, and use of peer reviewed research which exists in the thousands on this topic.

A large number of the population may be in a category with significant sensitivities that cause them to avoid environmental factors such as chemicals, indoor molds and dampness, or electromagnetic radiation or electric fields.

These people range in the millions. The chemical sector there is estimated to be at 15 percent of the total population. Those sensitive to indoor molds and dampness, 24 percent of the total population. With the electromagnetic and electric concerns, 9.8 million in the United States.

Millions of individuals within these categories are in the severe range, with regard to environmental disabilities, actually. They are designated as partially or totally disabled. And they may be unable to work and access public services and programs, as a result.

And the current status quo is unacceptable in the public services and program sector, and workplace, with regard to accommodating those with environmental disabilities. Even at the Department of Justice ADA office, there appears to be some confusion on the matter as to whether the ADA covers these individuals, even though I know that people are accommodated now and then throughout the United States, based on these disabilities.

A key concept that must be adopted is to provide these people, identified by their own treating physicians, with their recommended accommodations and alternatives in the workplace and in places where they go to receive services and programs. And when accessing services at home, by phone, Internet, or when they are accessing public utilities, that allows them to avoid the triggers for their own illnesses.

Do not force environmentally ill people to expose themselves to triggers to receive services or to work. These measures will in turn protect the general population, improve public health, and reduce the number of disabled people. Because the triggers for these environmental illnesses are not good for anyone.

Some examples, some practical examples of needed furniture and equipment are as follows. For those with chemical sensitivities, or multiple chemical sensitivities, provide alternatives that avoid triggers, scent-free policies, low to no VOC policy for furniture and equipment, provision of appropriate air cleaners, no use of pesticides or herbicide in their presence or even when they are not there. Following the presence, they may be ill from it. Use of no scent green cleaners and just making use of the treating physician recommendations.

Those with mold related illnesses, sick building syndrome, building related illness, asthmatics, those with lung disease. The same as the chemical sensitivity and multiple chemical sensitivity people, they would need that same list, and we would add alternatives to avoid water damaged buildings and mold. The electro-sensitive, provide alternatives that avoid trigger. Especially with smart meters, allow them to opt out of wireless technologies that are placed on their home that radiate their entire home, and make it impossible to live within their own home and be healthy. This has come up just recently with the establishment of the smart meters by the public utilities.

Provide shielding and furniture that may be necessary in the workplace. Or even if they are going to put something on your home like that, have the utility company provide shielding.

I have such a smart meter which is making me sick on my bedroom wall right by my headboard. That is an egregious example of discrimination against me, I feel, but I need help from the ADA to implement my physician recommendations. Thank you very much.

>> JOHN WODATCH: Thank you, Ms. Brinchman. Next, we will hear from Diana Owrey.

>> DIANA OWREY: Good morning. My name is Diana Owrey. I'm a physical therapist from Long Beach Memorial Medical Center. And I work specifically with the spinal cord injured population, and as part of a community-based day treatment program. And this program's position is to bridge the gap between the acute inpatient world and transition patients into a productive lifestyle with activities that they were doing prior to their injury.

The majority of our population are young individuals that are into activities and exercise. And what we are trying to do is help identify ways that they

can keep going with those activities after rehab and after they finish with our program.

Typically our patients, they have doctors' appointments, they like to go to the gym, they like all kinds of activities. What we are addressing here is the equipment and the furniture for those type of activities.

Today's regular ADA regulations get people into gyms and hotels and things like that. But the new regulations that you are proposing are a great way to expand on that and allow them full and integrated access into fitness clubs, and helps them after they are finished with therapy to keep going. And the problem that we have is therapy benefits are becoming shorter and shorter. So what we want to do is set them up for success after they are finished with therapy.

Typically I see, when my patients come back, if they are not set up with accurate resources they gain ten to 25 pounds which as we all know is going lead to cardiovascular problems, obesity, diabetes, secondary causes that are going to be more and more expensive to the healthcare world.

So by setting them up with a nice maintenance program, that doesn't necessarily have to be with a physical therapist but somebody who is educated on how their bodies work, and how they can function with different machines and the right equipment that can help them. There's not a lot of these programs or area where I can take my patients. Regular clubs only have very limited equipment, it's usually stuck in a corner. They don't feel like they are integrated into a society just like everyone else.

Some of the programs I find in the L.A. area, there's Next Step Fitness Center, which is a great facility with accessible equipment. They feel like they are just going to the gym as anybody should.

Hospital programs, they do have a lot of accessible equipment. It is not as the high quality sport, gym-type equipment. So, we need to try and merge the two. Hospital rehab programs should have the same equipment that gyms have so they know how to use it, they're comfortable with it. The part of the problem with hospitals is it's an institutional feel which we're also trying to get off psychologically, we want these people to, people with disabilities should feel comfortable anywhere.

Gyms need to provide equipment that has simple changes like larger seats, swing away seats, things that can be operated from, from a wheelchair or with simple assistance. Color contrasted controls, treadmills with lower speeds, lifts. There should be a lift on every pool. Raised mats. If you want to be able to stretch out, it's a lot easier to get onto a mat than it is to get

onto the floor. And all of this, like I said earlier, should not be stuck into a corner.

One simple way to fix it is most gyms have multiple machines of the same muscle group. Change one of those machines out to an accessible machine, put a sign on it just like the one on the bus that says please give priority to persons with disabilities. And it's a simple way that everybody can just kind of integrate into that fitness world.

Staff trainers at gyms can be really easily educated. Maintenance programs, of course, are not covered under physical therapy benefits. So, with some consultation services and a little bit of education, trainers that know how to do exercise-based programs can help push these people with disabilities to keep going and keep up their fitness and reduce costs later on of the secondary problems.

Another simple thing that can go in gyms or, like we're talking about, doctors' offices, anywhere, gate belts, sliding boards, lift type mechanisms. All these things can just, really easy additions that can make a big difference.

So, what I'm almost talking about is like a collaboration between the rehab world and what I call the outside or non-rehab-based world, fitness clubs, things like that. If we do that, it's going to set up so much more success, because the critical period of time is right after rehab. We just want to keep going and have them on the same program that they were on before, and it will just make them so much more successful. And with the right tools, this can happen.

Because if you maintain that strength, they are going to maintain that functional independence, and prevent all that secondary injury, stroke, CVA. So, I think just the rehab world and outside world need to collaborate. And there is going to be a big change and a lot of helpful things for persons with disabilities. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate your taking the time and your testimony as well. Our next commenter will also be via the phone. It's Cindy Sage of Sage Associates.

>> CINDY SAGE: Good morning, my name is Cindy Sage. I'm the owner of Sage Associates, an environmental consulting firm in Santa Barbara, California. I've been a professional environmental consultant since 1972 and taught at the University of California Santa Barbara for about a decade. My particular expertise is in the health and in the environmental aspects of electromagnetic fields, and radio frequency radiation, as they affect the human living environment.

I'm also a senior fellow at the Department of Oncology, School of Health and Medical Sciences at Orebro University Hospital in Sweden. And I have served as an expert witness on these matters in both federal and state courts.

I am here to speak to you today, and I thank you for this opportunity. I want to talk about the growing issue of mobility limitation and health risks that come from exposure to wireless technologies. And that is to radio frequency and microwave radiation. And I will have four recommendations to your board.

My particular concern is for those in this country who have medical sensitivity to electromagnetic fields and radio frequency radiation. And for those with medical implants, who are endangered by electronic interference or radio frequency interference in the environment, and so are unable to live a normal life due to wireless exposures. Such interference can come from every day things like cell phones, cordless phones, Wi-Fi installations and other wireless technologies as they proliferate.

These exposures can greatly restrict access for people to public places, like hospitals, libraries, public transportation of all kinds, the workplace, the school environment. And now with the rollout of wireless electric and gas meters, even in one's home, we have and expect to have increasingly high radio frequency and microwave exposures.

I have got a couple examples where we have been able to validate that even travel on a bus, a train or an airplane where it has installed wireless or heavy use of cell phones during transport can lead to radio frequency microwave levels that can shut down the proper operation of implanted electrodes, and implanted medical devices. In one instance, deep brain stimulators that are used by Parkinson's patients are sensitive to this kind of radio frequency interference and can either disrupt normal function or shut down these electrodes entirely.

So, for people who are using public transportation, the use of these wireless devices, not by the person, but by those around that person, can create a situation akin to secondhand smoke. You might think of it as secondhand radiation, and it can be a real limitation for people to live a normal life.

RFID scanners that are in wide use in hospitals may have the same effect in disrupting implanted electrodes and other medical implants. People who are electrically sensitive are already medically sensitive to these exposures, can be restricted from visiting loved ones in hospital situations or medical clinics, where wireless reporting systems are in operation.

Even the security gates that are large producers of radio frequency microwave radiation that bracket entry doors of many hospitals and stores and libraries and so on, government offices and public places, can be impediments to people.

So, I'd like to make the point to you that there is really just not enough recognition yet in this country at least of these risks. And let me then go directly to my recommendations to you, hearing that beep.

I would urge you to consider new ADA rules protecting people with medical sensitivity to electromagnetic fields and radio frequency radiation. And they need to be clearly addressed by the Department of Justice and rules governing Title I, Title II and Title III of the ADA.

Number two, I would encourage you to make explicit to utility companies in this country that there will need to be exemptions for people with radio frequency illness and electromagnetic sensitivities or medical implants, so they do not have to have the involuntary exposure from wireless utility meters placed in their homes.

Three, we need to have a place for citizens to register their complaints and problems with daily living environments where wireless exposures are limiting them. And to date the FDA and the FCC are not providing that service. We hope you will consider it.

And fourth, we need you to be proactive and communicate these concerns to the FDA Center for Devices and Radiological Health and to the FCC. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate your testimony this morning. Next we will hear from Rose Daly-Rooney, who is with the Arizona Attorney General's Office.

>> ROSE DALY-ROONEY: Our Civil Rights Division offers comments on movie theater captioning and video description.

The public and the courts would benefit from the Department's regulatory and interpretive guidance about the movie theater industry's existing obligation to provide captioning and video description for its customers with sensory disabilities. However, we urge the Department to change direction and offer guidance on how to apply the general undue burden factors to the movie theater industry instead of proposing a rule whereby movie theaters would have five more years to equip only 50 percent of their screens.

The ADA already provides a framework for analyzing the auxiliary aids and services requirement. The framework arose from debate and compromise in

Congress and now requires public accommodations to take the steps necessary to ensure that people with disabilities are not treated differently or denied services because of the absence of auxiliary aids and service. And to do so to the extent that it would not result in an undue burden. The auxiliary aids and services provision requires full and equal enjoyment. The undue burden general factors set out by the Department about undue burden provide the flexible individualized approach to determine the limit of that obligation for a particular entity.

The framework was built to last, and it can handle the changes of time including technological advances. The current proposal does not comport with that framework, and we offer four reasons to support changing direction.

First, the current proposal does not provide an individualized assessment of the net cost and financial resources of each theater as the undue burden analysis does. For example, net cost will vary based on the equipment the theater has. The theater industry has provided information that it will be cheaper to install on digital equipment. There is a various rollout among the theaters. So that will vary from theater to theater.

Additionally, the financial resources will vary, because as we know, the movie theater industry is comprised of entities from small independent theaters that operate in rural communities, all the way to huge wealthy corporate conglomerates and everything in between. So, as Congress intended, the undue burden defense is flexible enough to answer the question of how much an entity can do before it rises to an undue burden regardless of its size and therefore, no categorical exemptions are required.

Second, the 50 percent cap in the current proposal sets an arbitrary ceiling on full and equal enjoyment for people with sensory disabilities that is not directly tied to the financial resources of the theaters. By the very nature of services that a movie theater provides, a person can walk into a theater, choose any movie at any location, on any date and at any time the theater exhibits the movies.

Under the current proposal and five years from now, movie theaters would only be required to offer 50 percent of the choices to people with sensory disabilities, irrespective of their financial resources. That's like going into a restaurant and only being read half the menu items or only being read the menu items when it's not rush hour. The Second Circuit rejected that in a case, and we think the Department should also reject that kind of proposal.

Although in reality some movie theater owners and operators may not be financially able to equip all of its theater screens at this time, the largest, wealthiest movie theater operators who are already spending massive

budget amounts to upgrade to digital screens could provide access on a 100 percent of the screens for a de minimis additional cost to the upgrade.

Third, the five-year sliding compliance schedule in the current proposal conflicts with the existing statutory obligation to provide auxiliary aids and services. When the ADA was passed it required auxiliary aids and services. When the technology became available to do so, the movie theater industry had an obligation. They've had an obligation at least since 1997. And the current proposal will not adapt to change as would the undue burden. No matter how cheap it gets, it's still only 50 percent.

In changing directions, the Department should propose regulations and draft interpretation guidance that clarifies that captioning and video description in movie theaters are examples of auxiliary aids that all theaters, regardless of size, must do so, except to the extent of an undue burden. That it is not a fundamental alteration, and that it is a de minimis expense, not an undue burden, for movie theaters that undertake the significant expense or secure the significant funding to upgrade or to acquire screens with digital to add the equipment necessary to show the caption and descriptions in the digital file. Therefore, those theaters who can establish it as an undue burden to equip 100 percent, that they must take steps to maximize choice, and guidance on how to maximize choice. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate your testimony. We also appreciate your leadership on this issue in the past. Our next commenter is via videophone. And it's Tom Green from Para Quad. Mr. Green?

>> TOM GREEN: (through Interpreter) Hello, good afternoon. My name is Thomas Green, I'm deaf and hard-of-hearing systems change advocate at Paraquad, Inc. I'm from St. Louis, Missouri. My testimony today is about the ANPRM and its accessibility service information system for state and local government entities and public accommodation.

The Internet, a marvelous advance in technology, has brought forth many innovative innovations and designs for communicating information digitally to millions of people around the world. State and local government entities have seized the advancements of technology and Internet as a means of communicating with the constituents they serve and are representing.

Unfortunately, there are barriers that need to be removed for access to all individuals. On January 5, 2011, the Missouri General Assembly had opening ceremony that was live video streamed on their web page. Unfortunately, deaf individuals like me could not watch the video, because it was not captioned.

We are in the dark ages. We don't know what is going on in 2011 for the state legislative agenda. Removing those barriers will allow deaf individuals to be full participants of our governmental affairs and full-fledged citizens of this great country.

Next, ANPRM, NG 911, a new generation 911. When I drive on a busy freeway, I often see electronics signs that say, for emergency call star 55. And I wonder if I could send a text, since I don't use the phone.

Most citizens don't have to concern themselves about 911 or the star 55 choices. But as a deaf person, I am concerned. I pay for services for 911 that I cannot access directly. It is important that we have direct access any time there is an emergency. To have 100 percent communication access, I recommend SMS, and MMS, on a text pager be required. We should be able to access 911 any time, anywhere, with any concerns about how we might do that.

Also, it would be a wonderful breakthrough if deaf individuals could call 911 through their video phones and talk directly in their language of preference, American Sign Language, to get the services and rapid assistance that we need. Thank you.

>> JOHN WODATCH: Thank you very much, Mr. Green. We would also from the Department of Justice like to send our condolences to your organization for the loss of your leader, our colleague and friend, Max Starkloff. Next we are going to hear from Elizabeth Toumajian. I hope I didn't mess up your name.

>> ELIZABETH TOUMAJIAN: Close enough. Good morning. My name is Elizabeth Toumajian, and I'm the fitness director of the Goodwill Fitness Center located in Southern California and Santa Ana.

The Goodwill Fitness Center is a one of a kind facility that is specifically designed for people with disabilities, physical in particular, and chronic illness. We have been in operation for a little over two years, and we have currently over 300 members, all people with disabilities that utilize our facility.

The goal of the Goodwill Fitness Center is to promote fitness much like a mainstream gym. But in addition to promoting fitness, what we're really trying to promote is also independence and an increase in the quality of life. The members that I have the privilege of coming into contact with on a daily basis share numerous stories about changes that they have experienced as a result of fitness and exercise participation.

It goes much beyond fitting in a certain size dress or losing a certain amount of weight. The changes that my members are experiencing are real changes like reduction in pain, weight loss, which makes mobility easier, and changes in their independence, so that they can travel and go places and be with their grandchildren at the park and that sort of thing. These are very measurable goals and that they have managed to achieve.

The Goodwill Fitness Center features a complete line of Cybex equipment. They have a specific brand called Total Access, and the Total Access equipment has been tremendously helpful in working with many different types of disabilities, specifically for those people with spinal cord injuries, or people who are visually impaired or blind.

Accessible equipment is very important, as well as facilities that feature this equipment. But in addition to the equipment, I really feel strongly that there needs to be some sort of implements for mandating education and training.

Working with people with disabilities does require a specific knowledge base, not only about the disabilities themselves, but about disability etiquette, as well as appropriate terminology to use when working with people with disabilities

In addition to the education, there needs to be a component of sensitivity training, in that people with disabilities often feel as though they live their lives in a fishbowl, because in our society, they tend to get a lot of attention, mostly unwanted, and they are constantly being watched or stared at.

It is important that, to have a successful fitness center, you need to have an environment where people don't feel like they are living in a fishbowl. They need to feel comfortable coming in with their modality implements whether it be a walker, wheelchair, and exercising just like any of us would at a mainstream health club.

I thank you for your time and look forward to seeing some action in the near future. Thank you

>> JOHN WODATCH: Thank you very much. We appreciate your comments today. Next we will hear from Mr. Mike Garvey.

>> MIKE GARVEY: Thank you. My name is Michael Garvey, and I'm currently owner of the Dumbell Man fitness equipment. (spells) I misspell it intentionally. I want to state for the record my parents are extremely proud of me.

Being involved in health and fitness industry for the last 30 years, I've been able to walk in and out of numerous environments, and was only recently as

the owner of a business that is in the supply of exercise equipment, facility design and equipment maintenance, that I came across the opportunity to provide inclusive fitness environments in a variety of locations.

I have in the past worked with Ms. Toumajian at the O.C. Goodwill Fitness Center. And, as of late, I've tried to become a proponent of inclusive fitness as I see as an opportunity as a private business owner, it's good for business. And it also, obviously, has a significant impact in creating inclusive fitness environments for those who don't have opportunities to exercise, mainstream individuals who really want to work out where everybody else works out.

So my testimony today is only to provide the DOJ with some examples of equipment as the aforementioned Cybex Total Access equipment. Manufactured in the United States, the Cybex brand has aesthetically pleasing club-looking equipment which a club owner or a nonprofit facility or taxpayer-based funded facility could purchase. And create environments within the main part of the exercise area within their facility, as opposed to sticking equipment in the corner or purchasing equipment that looks rehabilitative in nature.

The equipment today from brands like Cybex, New Step, the Cross Trainer, Cyfit, the Total Body Trainer, the Marpo Kinetics Rope Trainer, the Matrix Crank Cycle, all exist. And the unique thing about the types of equipment that exist from these brands is that they can be utilized by the disabled and most able-bodied individuals as well.

These manufacturers, I think, are ahead of the curve in terms of creating fitness equipment that will enable disabled individuals to not only utilize exercise equipment but also do it within a quote-unquote, "inclusive" fitness environment. And I think that is extremely important.

I think it's an opportunity not only again for nonprofits or tax-enhanced facilities that they can create these environments. But also for the private business owner to understand that there is a market out there that is probably underserved and an opportunity for them to create new marketing and new programs and new revenue streams that they may or may not know exist today.

I do have a submittal with examples of some of the exercise equipment. And I have outlined a sample of some pricing structures that, if upon your perusal, you will see that the costs of purchasing said equipment doesn't really differ that much from standard exercise equipment, if you will, and I'll present that today.

That's it. That is the Dumbbell Man, I think you for your time.

>> JOHN WODATCH: We appreciate your coming today and look forward to the information you are going to provide for us. Thank you. Next we are going to hear from Kristina Ripatti.

>> KRISTINA RIPATTI: Thank you. My name is Kristina Ripatti. I am a former police officer with LAPD. And I'm here to share my personal experiences on some of the issues that were just discussed regarding making fitness centers and gyms accessible.

I personally was paralyzed four years ago on the job. I was a police officer. I was shot. As a result, I am a T2 paraplegic, so I'm paralyzed from the chest down.

My lifestyle before I got hurt, working out and fitness was an extremely important and huge part of my life and not just for my job, but it was my hobby, my lifestyle. So, when I was shot and in the hospital, my life was completely up ended by this injury.

I didn't know exactly how I was going to deal with this. It affected every aspect of my life. But in the hospital, I was just like, let me get out of here and get back into the gym. Because I knew mentally and physically, that's what I was going to need to help get me through this. I knew I was going to need now my strength especially to move my body around with just my arms. And I knew how important the mental aspect of dealing with the injury was going to be, because it had been before I was injured.

I went back to my gym and, Gold's Gym, so it was a big national gym, with a lot of equipment. And of course, I had never realized before, but ADA accessible now meant a ramp going into the gym, and that's where it stopped. Except for maybe some bars in the bathroom.

And I was looking around at all the fitness, cardio vascular equipment, rows upon rows of treadmills, stationary bikes, elliptical machines, cardiovascular equipment that you had to use your legs for everything. There was not a single piece of equipment in there for your arms, whatsoever.

And then upon looking at all the weight training machines, most of them were not accessible for me as far as transferring onto the seats. The seats were small. Because I'm paralyzed from the chest down, I have no balance. I required a great deal of assistance in order to do a workout.

I'm fortunate, because of my insurance, I have worker's comp. And I realize that I get a lot more benefits than many of the people in my same situation. I do have a trainer now that helps me. And I haven't let these road blocks stop me from working out. I've been able to adjust my workouts and still

come up with a routine. However, these simple things are often enough of a roadblock to keep most people from going into the gym.

I think we all know now the importance of fitness. I don't really need to hit on that. But for people with disabilities, spinal cord injuries, especially, it is extremely important for warding off secondary issues related to the injury.

Most of the disabled population, as far as spinal cord injuries, are young people, and many of them are active. And they get disabled, get spinal cord injuries, as a result of an active lifestyle. And especially with war veterans coming over now, more and more it's going to be increasing more and more – amputees, spinal cord injuries.

I can't reiterate how important it is to return to your active lifestyle once you are injured with such a catastrophic injury. But like it was already said by the Dumbbell Man and Elizabeth, there is equipment that exists out there already.

Cybex does have inclusive line of fitness that will serve the able-bodied population and disabled body. New Step is a recumbent trainer that allows me to use my entire body, simply by adding a leg stabilizer. Crank Cycle allows people with disabilities to be in a group class environment. And just a side note, many of these fitness centers have pools, yet most of them don't even have a simple lift, which is a very easy remedy to fix.

You don't need to have a ton of specialized training. The Inclusive Fitness Coalition is working on certification programs, so trainers can have a simple certification program to assist people with disabilities.

I can't emphasize enough, inclusive and integration. Don't put the equipment into a corner. We want to feel like we are human still, and a part of the everyday population. And to be able to have that would be so huge. Thank you for considering this.

>> JOHN WODATCH: Thank you very much for your public service, first of all, and for coming forward and sharing your story with us. We appreciate it. Our next commenter is going to be on the telephone. And it's Marilyn Piepho.

>> MARILYN PIEPHO: Yes, this is Marilyn Piepho. I would like to speak to the issues of vision loss.

And the main thing, like the lady who was just speaking, is just to be part of the mainline, and not to be excluded from things that everybody else takes for granted.

I have just lost my vision in the last ten years. So, it's been quite a change. Going to the movies, I always thoroughly enjoyed. And I find audio description is being resisted so much in the movie theaters. There's very few houses that even have equipment so people with vision loss can enjoy movies also.

One comment I want to make. The ones who do, they tell me that they have to almost disassemble half of the projector to put the audio description disk in, which of course I can see why they are resistant to having it. The receivers they have often don't work, have dead batteries. When the movie starts, you find out it doesn't work. By the time you get out, get a new receiver, get new batteries, the movie is half an hour into it. A test pattern, before the movie actually starts, would be fantastic if that could be embedded in the film somehow, so you know whether your receiver works or not.

Going to forms, I have found several of the forms in the State of Ohio with my retirement plan; none of the forms are accessible to fill out on the computer. You have to print them out and fill them out in print. That would be really fantastic if forms were actually doable on the computer, so they could be filled out.

Some other issues I would like to speak to also is, I call it a disability penalty. Everybody else goes and buys the cell phone for maybe \$50. To get one that is accessible at least double that price. Maybe triple that price. I call that a disability penalty. So much equipment you have to pay double and triple what everybody else pays to get something usable. That would be really great, if accessibility was automatically built into electronic equipment like cell phones, like caller I.D., et cetera.

Those are just some things that I took for granted, before I lost my vision. And now I find it's either not available or so expensive to get it available.

TV menus. When they are selling things on TV, this is another electronic format. Most of the time, the numbers on the screen, they never verbalize it, or they say, call the number on your screen. So many things I would have liked to buy there is no access. This is just on simple TV.

Even the converter boxes that came out, all visual menus. DVD movies that have audio description, the menus to get to audio description are all visual. So, even though there is audio description, you cannot even get to it.

Most remotes do not have the SAP button, which would get you automatically to audio description. You again have to go through a visual menu. So that would be fantastic if even TV and DVD movies would be accessible.

Just some other things. The lady before me spoke of exercise. I have tried to go to our community center. They won't even unlock the door so my guide dog and I can come in safely. The door they have is automatic. I've already been hit in the face with it, I've been injured, my dog has been injured. The flanking doors which are regular doors they refuse to unlock, so you can walk in safely.

I've tried to join an exercise gym. Their initial response was you can't come unless you pay for someone to come with you to assist you. But I'm working with them, and I think they are coming around.

It is just a challenge to do the things I used to do without even thinking about it. It would be so fantastic if accessibility was just in the mainline, and accessible, the accessibility itself be accessible instead of starting with the need for vision.

I really appreciate you considering updating the ADA to the electronic age. Without electronics, I could not have even kept working. My speaking cell phone, my computer makes that possible. But I so much want to do all the things I did for so many years that now I am barred from. But I'm still trying!

Again, thank you so much for your interest. And that is it. If there are any questions, let me know.

>> JOHN WODATCH: Thank you very much. We appreciate your testimony. I think one thing that it's clear to us that the ADA is about, is opening up every day American life for people with disabilities in this country. And I think you are giving us some ample food for thought.

>> JOHN WODATCH: Next we are going to hear from Jeff Hansen from the corporate counsel of Troon Golf.

>> JEFF HANSEN: Thank you for the opportunity to be here today. I'm here to talk about the equipment and furniture issue and, in particular, the issue of golf course accessibility to golfers with disabilities.

Troon Golf has been in the golf business for over 20 years and is the largest third-party management company in the world. Troon Golf manages over 150 golf course facilities, including public daily fee, resort and private club courses located in 24 countries and 31 states in the United States.

Troon has become a leader on this issue of providing accessibility of disabled golfers to courses. We provide instruction when necessary, tee times. We allow golfers with disability to use standardized carts by driving them on tees and greens when that assists. We provide a staff person to chauffeur golfers if that helps.

And we also provide single-rider carts at various facilities, either through ownership or pooling. Troon has attempted to make significant efforts on this issue by meeting with the manufacturers of single-rider carts and testing themselves ourselves, to determine what is the best fit. Troon has had numerous conversations with golfers with disabilities to see what we can do to assist, and we also have participated in conference calls conducted by the NGCOA with other owners and operators of golf courses.

We have recommended to all our facilities that the owners either purchase a single rider cart or make it available through pooling. Several owners have purchased the carts but the majority have not based on the economic conditions of the industry. It's just not feasible at this time. But we have kept statistics over the last year that I want to share with you.

In Arizona, we've had seven rounds of golf where a single rider cart has been used out of a total of 217,300. That's outside of Arizona. It hasn't been used very much. In Arizona, we have had six requests out of 411,900 rounds for a single-rider cart. An exception to that is we have two golfers with disabilities that have used the carts 35 times between the two of them. But outside those 35 uses, there's only been six other requests for usage.

We have never had a situation where a golfer with a disability has requested a single-rider cart and we have not been able to fulfill that request. Through pooling generally, we make sure that every region that we have a cart available. And if we get a call and somebody requests it, we make sure that the cart is there and available.

The position on the proposed ADA regulation requiring every owner to have a cart doesn't really fit with the historical statistics that I've just commented on. The cost to owners of these carts is anywhere between 8,000 and 20,000 dollars per cart. In this climate where very few courses are able to make a profit, the owners just simply can't justify the expenditure at this time.

The other issue is the safety concerns. There's been no ANSI safety test or certification on the single rider carts. And until that is done, we have a difficult time sending them out. Although we do, because if something happens, obviously there is going to be some issues that we will have to deal with.

So based on our historical statistics, what we are recommending, that we support the ADA's continued efforts to make golf available to everyone. That helps support our industry in the future. We obviously want everybody to play that can. Pooling does work, as I mentioned. Nobody has been unable to use a cart when they have wanted it. But we just don't think that the requirement of requiring every course to own one is practical at this time.

Until the safety standards are certified and met, we believe that the pooling issue will continue to serve the golfers with disabilities, and that is what we would encourage the panel to continue to promote.

>> JOHN WODATCH: Thank you very much, Mr. Hansen. We would hope if you provide written comments, you would give us some information on how pooling has worked in the past. Next commenter is Regina Dick-Endrizzi.

>> REGINA DICK-ENDRIZZI: Hello. Good morning. Regina Dick-Endrizzi. I'm the director of San Francisco's Office of Small Business and Small Business Commission. I'm here to speak to you primarily on the web access components that you are considering.

First, the Small Business Commission really supports that businesses make their businesses accessible, and that it's good for business. Recently, we have seen a high number of lawsuits for small businesses around accessibility. And what I've come to learn in listening to the businesses and these are your very small businesses who don't have access, they don't have lawyers and retainers. Many of them are business owners where English is not their first language. The laws around accessibility with the federal and state is very confusing and they don't understand it. There is a sense of frustration that there's not better communication around it.

What I am here to say is, in terms of the considerations for web accessibility, I'm not able to right now speak on the specific questions that you have. But a big broad perspective is that we look at the web community as part of a community that helps educate our small businesses on the accessibility.

So, that we have our Internet service providers, they sell business packages. That when they sell their business package, they are also providing information on the requirements that businesses may in the future may need to do to make their sites accessible. To engage technology sectors such as Google or YouTube. Many businesses use YouTube as part of providing video information on their websites, as well as Yelp and those types of Internet service providers that many businesses are using to market their business to help provide that education and information.

Also, the federal government funds our neighborhood, our business economic development organizations. And they receive the HUD dollars. And many, they are training and developing our entrepreneurs, and many of them are on marketing. So, I think it would be a great thing to make it a requirement of our economic business development organizations to also provide education and information, both on accessibility for the business organization and their physical structure, but then as we move forward into the technology structure as well.

So, I'm just here to say from hearing from the business community, I really think that we as government can really take a look at some of our other institutions that are intersecting with businesses to help educate them on what's good for accessibility so they don't find themselves in court and finding it very expensive to defend themselves, even with what is readily achievable.

>> JOHN WODATCH: Thank you very much. We appreciate your coming here today and sharing your information. Next we are going to hear from Fred Nisen.

>> FRED NISEN: (through Interpreter) Thank you, my name is Fred Nisen, I'm an attorney at Disability Rights California, a private nonprofit law firm designated as California's protection and advocacy system for people with disabilities.

All of the issues addressed in the Department of Justice 2010 Advance Notices of Proposed Rulemaking regarding Title III of the ADA are extremely important to people with disabilities, because regulations in these areas will help ensure that people with disabilities will have equal access to all aspects of community life, which is the premise on which the Americans with Disabilities Act was based. In particular, the accessibility of medical equipment is vitally important.

Regulations in these areas are desperately needed. Most medical examination and diagnostic tables tend to be too high. These tables need to be adjustable, to allow people with disabilities to transfer as independently as possible.

Since the average height of the seat of a wheelchair is 19 inches high, the minimum height should be between 17 inches and 19 inches high. Notwithstanding these standards, these regulations need to remind covered entities to provide other reasonable modifications to ensure access, including transfer assistance, to ensure that all people with disabilities have access to the services.

In addition to a standard height, there should also be standard table surface width, 28 inches and length 68 inches. Most tables are too narrow for people with movement disorders, such as cerebral palsy or people with obesity. Many tables are also too short, creating a problem for people with balance issues because their feet hang down. For example, my doctor has an accessible table for people with disabilities, because it's lower. But because of how narrow and short it is I cannot get onto it. Tables also should be required to have extensions to allow them to be made wider or longer if necessary, by persons with disability.

With regards to transfer assistance in medical facilities which utilize mechanical lifts, we feel the use of mechanical lifts should not be the only form of transfer assistance offered.

Generally, the person with the disability knows what type of assistance they need. Some people with disabilities cannot be transferred safely using a mechanical lift. The ANPRM regarding medical equipment and furniture inquiries as to whether the Department should require medical facilities to have lower hospital beds.

We think there should be a requirement that hospital beds be adjustable and that the lowest possible height should be no higher than 16 inches high. People who use mobility devices such as canes and walkers would have to leap or jump down to get in or out of bed. The same is true for people who use wheelchairs, who do a pivot transfer or use a sliding board. They are also adjustable. So, if a person is tall, the bed would be accessible to them as well.

Disability Rights California urges the Department to include a section in its new regulations requiring hotels and other entities providing sleeping rooms, ensure that they have beds that are accessible to people with disabilities. As mentioned in the ANPRM, there should be space to accommodate a mechanical lift.

There should be enough room under the bed for the base of a lift to fit under the bed. In addition, the pillow top mattresses are too high for a person with a mobility disability to transfer onto with or without assistance and hard to transfer out of because of how far the mattress indents.

We know of people with disabilities, including myself, who had harrowing experience with these beds. We recommend the new regulations require that at least half of the accessible rooms have a mattress other than a pillow top mattress.

Disability Rights California urges the Department to include a section in its new regulation explicitly requiring freestanding non-fixed furniture and equipment to be accessible to persons with disabilities. Using ATMs as an example, there is no difference to the public between a fixed ATM and a freestanding ATM. The public uses both types for its banking needs. Our clients have pointed out numerous examples of freestanding furniture items, including ATMs that are inaccessible. However, in order to ensure flexibility in innovations, we encourage the Department to opt for a general accessibility requirement for these items rather than specific details, technical standards.

As the Department notes, many EIT items such as ATM, points of sale devices and electronic kiosks contain touch screen interfaces that are inaccessible to persons with a visual impairment, as well as persons with disabilities that limit use of their hands. Many touch screen systems may be made accessible to large numbers of persons with disabilities, solely by including voice command systems and tactical key pads. Disability Rights California urges the Department to require that all EIT items be accessible to persons with disabilities with the caveat that programs' access and barrier removal be stressed as the operative requirements rather than specific technical standards in order to ensure flexibility as technology evolves. Thank you for allowing me to comment about these ANPRMs. We will be submitting detailed written comments within the next two weeks.

>> JOHN WODATCH: Thank you very much. We look forward to your written comments as well. Thank you for being here. Next we are going to have another telephone commenter, Jackie Hunt Christensen.

>> JACKIE HUNT CHRISTENSEN: Yes, good morning. Thank you for this opportunity to testify. I will be speaking to the issue of nondiscrimination on the basis of disability by state and local governments and places of public accommodation, and also furniture.

I'm a 46-year-old author and volunteer environmental health activist. At age 33, six months after the second of my two sons was born, I was diagnosed with Crohn's disease, and at age 34 with Parkinson's disease.

I'm the author of two books about Parkinson's disease, with a third on the way. And while I'm involved with several organizations, the views I present today are my own.

Parkinson's disease is a progressive neural degenerative disease second only to Alzheimer's in prevalence. Average age of onset is 55 but five to ten percent of patients are diagnosed before age 40. Major signs are tremors, slowness of movement, muscle rigidity and poor balance. But there can be cognitive impact such as memory and decision-making problems as well.

Stress makes these things worse. Dyskinesia, an uncontrollable writhing movement that is caused by medication used to treat Parkinson's, can induce a lot of sweating. For example, if I am at an ATM, I may not be able to choose quickly enough before the session times out. For me it is helpful to have buttons to push and a few seconds longer to make my choice. When I'm having trouble with dyskinesia my fingers are too sweaty and won't work on the touch screens.

By the way, this is a problem with many places. Information kiosks at museums and stores, on smart phones, music players and many other new

widgets that are becoming available every day. To cope with some of my motor symptoms, I underwent deep brain stimulation surgery, or DBS, in January of 2006. I have an electrical lead going into each side of my brain that is connected to a neural stimulator on each side of my chest.

DBS has greatly reduced my rigidity and dyskinesia, but I have a whole new set of issues to deal with. There are magnetic switches in the neural stimulators which can be shut off by large magnets, such as those in the doors of grocery store refrigerator and freezer sections.

And also stores are sources of electromagnetic interference such as health protection systems or surveillance systems. At Target or other stores I need to walk straight down the middle between security pylons or my system will be turned off. When I'm off, I stiffen up and my dyskinesia will return within about 15 minutes. For people with tremors, the effect is almost immediate, and there is a risk that Parkinson's symptoms will worsen temporarily after the device is turned back on.

Hilton hotels in particular seem to have hidden surveillance systems. I have been turned off in many places, including a local emergency room, or a nurse was reaching across my body to scan my wrist band. A scary, most expensive incident was when some unknown source of electromagnetic energy put one of the neural stimulators back to factory settings, which is zero. Checks of the system showed that it was on. It took a few months of doctor visits and finally a trip from Minneapolis back to Cleveland Clinic where I had my surgery, to find the problem. We never did identify the source of the electromagnetic interference.

None of these sources of large magnets or electromagnetic interference have any signage to warn to people with implanted medical devices, or those with sensitivity to electromagnetic radiation. I had my DBS done because I had begun to feel like a prisoner in my own home. Now I'm finding that possibly this treatment could return me to that prison. I think the ADA should address this.

In addition to public notification at each source, I would like the DOJ and other federal agencies to examine the growing body of evidence from Europe about hazards of EMR from cell phones, Wi-Fi, smart meters, et cetera.

Lastly, I have read the testimony from previous hearings. And as someone with Crohn's disease, I want to echo the ADA to formally adopt and implement the Restroom Access Act. I will be submitting materials, a section of my book Life With a Battery-Operated Brain, and with information from Dr. Gary Olhoeft about electromagnetic interference and implanted medical devices. Thank you for this opportunity to testify.

>> JOHN WODATCH: Thank you very much. We look forward to your written testimony. Next we will hear from Mr. Walter Park.

>> WALTER PARK: Thank you very much, ladies and gentlemen, for coming to hear us today in the provinces. We have a lot to say to you. And I can't speak in a place where we are doing the public's business today without mentioning the destructive violence that happened to all of us in the public and to the public's government in our House in Congress last week. Like all of us here, I feel just terrible about that, and I hope that we can move on in some positive kind of way.

I'd also like to say at this very hour, Governor Jerry Brown is about to announce a Draconian budget for the State of California, which is not allowed to go bankrupt. Unfortunately, which is just going to be extremely disruptive to people with disabilities, particularly those trying to live at home independently, without state services, which are going to disappear in the next fiscal year.

My name is Walter Park, I'm a resident of San Francisco. I'm a person with a disability, HIV AIDS. I've had it for 26 years. I'm one of those very strange people who didn't get sick, despite not taking any medications for 25 years. Although my friends did. The effects of that on me are, the salient conditions I have are low vision, pretty much vision in one eye. I now have learned to appreciate striped stairways in a way that was only academic ten years ago.

Of course we don't stripe them, or we do it very irregularly. Also, my disabilities include depression and probably a lack of stamina. I have a slide presentation here, if we can get to it. San Francisco has a lot of cutting edge experience with accessible technology.

Over ten years ago, we insisted that the JC deco street furniture, the automatic toilets be accessible and they are. We created the first accessible ATM in the country here in City Hall in San Francisco. We created the first talking ATM in San Francisco. We created the first talking door entry system with Viking Electronics which are now at every public housing project in San Francisco. And all of our public buildings where you use a push button door entry system. There are 280 talking signs in City Hall which have actually already become obsolete perhaps.

But we did everything we could to try to make those work for orientation of people who are blind or have low vision. The next Muni system we have here, which is the Muni Transit Alert System, provides talking signs in each of the transit shelters, so that not only can a person see the sign, but you can also hear the sign. And we now have hundreds of APSs, accessible pedestrian signals downtown in particular. They have lots of operational

problems, and if I had more than five minutes I'd love to talk to you about them more.

We now have, as a result of a lawsuit, we have visual paging as well as auditory paging at SFO, at the airport which you probably came in at. Before that, you had to pick up the white courtesy telephone to find out where the accessible information was, which didn't work of course if you did not hear.

And more recently, we have adopted accessibility standards for destination-based elevators. These are the new elevators that I have some photos, but maybe you won't see them right now. I will give you a copy of the PowerPoint presentation. In fact, I've already e-mailed it to your staff.

Instead of an up and down button, these elevators have a telephone style control pad, and you need to know where you are going. It will tell you which elevator to get into. The interaction is more complex than up and down. If you get on the wrong one you may have to come back to the lobby again and start all over. People with no disabilities have trouble using them at first. People with disabilities have quite a few problems using them.

We just spent two years going through a public hearing process to create about a ten-page document which we call Administrative Bulletin 090. We started by reading ANSI and ADAAG and found it was entirely lacking, did not provide accessibility either visually, tactilely, auditorily, voice, in any way that we cared about, even positioning of keys and so on. So, we basically invented our own standard. I'd like you to incorporate that into your work, of course.

We have a working model. It's already being used in buildings throughout San Francisco. So there is no technological impediment. There is no cost impediment. They are on the grounds. We would like you to incorporate them. I and others who worked on that in the last two years will give you all the details about that, not during these five minutes.

Touch screen building security is also extremely important. Linked to those elevators and increasingly to others are touch screen security systems in high-rise buildings. Twenty years ago I could walk into any high-rise building in San Francisco, simply go to the office I needed to go to and see the person I needed to. Now, I call in the day before, they can put my name into their computer through a normal web browser. When I get there, there is a kiosk, which uses a touch screen, which does not talk to me, which has no tactile feedback, which simply does not work for a disabled person. That's how I get into the building.

So, there is no root there. Those kiosks must be made accessible. There is a card reader there, which ought to have Braille on it and so on. The touch screen, of course, doesn't work. I could go through all of that. Ticket machines and so on, present the same kinds of problems, although we are doing well now on transit.

There are pervasive EITs for commercial transactions for transit, for security and various paths of travel which are both in the public area and in public accommodations. We now have ill-formed ideas on the smart city, which is going to require much more of this including use of our cell phones. I would like you to do four things, if I have another minute or two.

>> JOHN WODATCH: A minute, please.

>> WALTER PARK: First I'd like you to make your scope extremely broad. I think one reason why you initiated this ANRPM is to broaden your existing scope. Make it apply to portable EITs, like kiosks in malls. Make it apply to those that are fixed. ATMs it already does. Security kiosks I just mentioned we would like it, too. Make it apply to mobile EITs. My mobile EIT is right here in my hand. It is the best possible interface device I can have as a sighted or unsighted person with the devices around me because I have already personalized it entirely to myself. It has its own memory. It communicates with me and other devices through Blue Tooth. It has all the radios in it, it's got everything in it.

Make this work for everyone. This is a part of the system now. You must make these accessible for everyone. We did it with telephones by making them work for people with magnetic assistance. We need to do this now for people who need any kind of assistance. We can't do it with technologies here. It is cheap and in front of us, and everybody's got one.

I'd also like you to go further in depth in what you're doing today. As I said, the ANSI standards didn't help us with DBEs. It looked to me like they were written by industry with not a lot of other input. I'm sure that's not true. I know you had 150 meetings with 1,000 people inputting. You have to do better on this round. We did not like reinventing this here in San Francisco because we don't want 50 different jurisdictions reinventing this stuff. We'd like you to do it with our help.

And we'd like you to be quick. Two years is plenty of time to do this. If it takes you five years to do the next round, you can stop this morning because the technology will have moved on ten years in the next five years. You will still be regulating something that would have been nice in the 1990s. Please don't do that.

I'd like you to be ambitious. What we can do we must do. Particularly in the area of technology, we now can do all kinds of things we couldn't begin to do before because of cost, because of technical infeasibility and so on. I'd like to you do those things.

Looking at the cost curves, we have Moore's Law on our side. No matter what you propose right now, we will be told that it's too expensive, and that it can't be done. Well, we found with elevators, it not too expensive. It can be done. We did a couple of things. First of all, we said, well, if we don't want you to manufacture it for a year or two, could you do it then? And people said yes. They couldn't do it today. They couldn't do it in six months but they can do it in a year.

I would rather have stronger regulations that go in effect in a couple years than weaker regulation that would work today because we are already beyond today. Move hardware cost to software cost, move installation and maintenance cost to manufacturing. Because there's nobody to do the installations, nobody to do the maintenance. Those individual costs don't work. They get undone by people in buildings.

>> JOHN WODATCH: Mr. Park--

>> WALTER PARK: One more second. We had a destination-based n elevator in L.A. which did talk. It was one of the first gen of elevators. But the building management simply turned down the volume because people didn't like having the thing talk to them. You have to automate such things. You can do that. I have a few more things to say which I'll talk to you about later. Thank you very much.

>> JOHN WODATCH: Mr. Park, you obviously have a wealth of information that would be helpful to us. We hope that your written comments will provide some of that information for us. Thank you.

Next we are going to hear from Michael Fiorino.

>> MICHAEL FIORINO: Good day. My name is Michael Fiorino. And I am the co-chair of the captioned movies committee of the Connecticut Association of the Deaf.

We are an independent nonprofit organization that serves the needs of deaf and hard-of-hearing individuals in Connecticut through advocacy, education, and referral. Most of our members of the commission are deaf or hard-of-hearing. I'm here to speak on behalf of the deaf and hard-of-hearing community in Connecticut.

Movies are an integral part of the cultural landscape today in the United States of America.

Movie themes, movie stars, and movie characters permeate our national discourse and are part of our shared national experience. Therefore, the issue of providing captioning of movies in public theaters throughout the United States is of critical importance to the deaf and the hard-of-hearing community in Connecticut.

Just like everyone else, we want to see and enjoy the next blockbuster movie along with our families and our neighbors and more importantly, in our local movie theater.

To be able to do so requires equal access to any showing in any theater of the same movies available and offered to the general public. The Department of Justice in its proposed regulations is proposing that only 50 percent of movies or 50 percent of movie theater auditoriums be equipped to display captions in five years. This is unacceptable. This is not equal access under the law.

This proposal would actually permit, perpetuate and legalize the discrimination against people who are deaf or hard-of-hearing.

Movies can currently be accessed by available technology and the time is now. The members of the deaf and hard-of-hearing community in Connecticut are united in asserting the technologies and formats now exist to make the movie soundtrack accessible for all movies and in all movie theaters.

For example, on demand screen captions are now available to movie theaters through a system developed by digital theater systems and it's known as DTSCSS, or cinema subtitling system.

They only show on the movie screen when the movie projectionist activates the captions. The other showings of the movie are unaffected. Also, as movie theaters switch to digital cinema technology, they will be able to select and display the captions at no cost. Zero cost to movie theaters. Zero cost means undue, no undue burden.

Upon approval of the proposed regulations for captioning of movies in public theaters, the implementation should be effective within one year after adoption. I believe this is a reasonable time frame for implementation. Five years is simply too long, especially considering that since the advent of the talking pictures, we have been waiting to enjoy like everyone else any showing of a movie in any theater and at any time.

Thank you for your time, and again, I am Michael Fiorino.

>> JOHN WODATCH: Thank you very much Mr. Fiorino. Next we will hear from Bonnie Lewkowicz.

>> BONNIE LEWKOWICZ: Yes. Thank you.

>> JOHN WODATCH: Please proceed.

>> BONNIE LEWKOWICZ: First let me express my deepest gratitude to the Department of Justice for this opportunity and to apologize for reading my statement quickly. My name is Bonnie. I'd like to address the issue of bed heights in places of lodging. I'm here as a consumer as well as the director/founder of Access Northern California, a nonprofit accessible tourism organization. Let me start with a little history. I've worked in the travel industry for more than 25 years in various capacities from '92 to '98, I was a travel agent specializing in accessible travel. During that time, I never once heard a complaint from clients or my friends with disabilities that they couldn't get into their hotel bed. I also traveled extensively for work during that time period and looked and stayed at over 200 hotel rooms.

Because I could independently transfer into all of these beds, and 23 inches is my maximum transfer height, I'm going to give an educated assessment that the bed heights during this time period were between 20 and 23 inches.

Then in 1998, I founded Access Northern California. And, one aspects of my work is to survey hotels for accessibility, not in terms of compliance with access codes, rather to take an inventory of a hotel's access features, and present this information in an access guide or website. Bed heights was not one of the survey questions.

Around five years ago I noticed a curious trend. Hotel beds were growing in height and correspondingly myself and other people with disabilities were having difficulties accessing these taller beds so I started to include bed heights on my surveys. At first what seemed like a few isolated instances was quickly becoming pervasive across the spectrum of lodging categories, from high end to budget.

In 2007, we conducted a bed campaign. For this project, we sent an educational piece and letter explaining the bed height issue to more than 200 properties in San Francisco and said that we were to create a registry of hotels whose bed heights were less than 24. In this letter, I asked hotels to contact us with their bed heights. I got zero responses so we followed up with a phone call.

Not one property could tell us the height of their bed, so they said they would get back to us. We eventually got two responses both of which were greater than 24 inches. While the lack of responses doesn't necessarily indicate that all beds were higher than 24, it does imply that the issue wasn't taken seriously. I then learned that J.D. Powers had conducted a customer satisfaction survey for the lodging industry and one of the must-haves in a lodging experience was a comfortable bed. The lodging industry responded by installing new beds and in some cases worked with bed manufacturers to develop their own branded premium beds. These new beds range in height from 25 inches to 30 inches, and are notably higher than the beds previously found in hotels and in countless instances pose a significant barrier to people with mobility disabilities including people with paralysis, polio, CP, short stature and seniors.

It's important to note at this time that people travel for a variety of reasons, pleasure, work, medical appointments, family gatherings and it's not just a simple matter of finding a hotel that doesn't have a tall bed because in some instances the hotel is chosen for you.

An example of this would be if someone has a work conference to attend and all the conference hotels have tall beds. If the only alternate hotel they can find with a lower bed is miles away and there is no accessible transportation available, they probably have to forego the trip. In my own case, I planned a trip for Thanksgiving to my brother's in Chico, three hours north of here. When I contacted the same hotel I stayed at for the past 15 years, I learned that their new beds were 27 inches high. I proceeded to call five other hotels and not one had a bed that measured less than 24 inches.

There are no other cities nearby so this meant that me and my husband who also uses a wheelchair and needs a low bed could not visit our family. In fact, we haven't been able to travel for two years now because of this problem with high beds. And, I'm afraid if this issue doesn't get addressed, we won't be able to take another vacation. These high beds have also forced me to travel for work with a companion that can help me into bed should I need it. This has doubled my travel expenses and limited my ability to be spontaneous. Tall beds are no longer just a trend. They have become the standard. And what is most disturbing to me about this is that rooms that were once accessible have become inaccessible once again. It's a step backwards.

I'm confident that this practice is not an intentional act to keep people with disabilities from staying at hotels. Rather, it's a response to the perception and marketing strategy by the bed industry that bigger beds equates to greater comfort. But where is our comfort when we are being forced to sleep in our wheelchairs because we can't get in a bed or move around in it because we've sunk so far into the pillow-top. On the positive side, there is

an easy remedy and one that would not pose an undue burden on the lodging industry. Require places of lodging to have beds that measure 20 to 23 inches as they previously did from the floor to the top of the mattress in at least some of their accessible rooms. These beds already exist on the market. In fact, the micro hotel chain uses a lower bed in their accessible rooms that does not compromise comfort for access. And, I will submit my other specific recommendations because I've run out of time.

>> JOHN WODATCH: Thank you very much. We appreciate your comments. We are going to switch several of our panelists right now. Joining us on the panel are Bob Mather, who is an attorney in the Disability Rights Section and Christina Galindo-Walsh, another attorney in the Disability Rights Section in the Civil Rights Division at the Department of Justice.

Our next Commenter is going to be on the phone, and it's Luciana Profaca

>> LUCIANA PROFACA: Hello. Thank you. My name is Dr. Luciana Profaca. I am the Chief Deputy Director for the California Department of Rehabilitation. And, first I would like to applaud the efforts of the U.S. Department of Justice to update and strengthen the regulations implementing the act. This is a very important move and I'm extremely grateful.

In your request for input on web accessibility, you ask about which standards to apply. We encourage the Department of Justice to craft regulations which will support the work of the U.S. Access Board to harmonize the updated Section 508 requirements with web content accessibility guidelines 2.0.

It is our understanding that in partnership with the Department of Justice, and the U.S. Access Board, the accessibility committee of the chief information officer's council is developing best practices guidance and resources for the federal sector. We would encourage broadening this to include other governmental entities, higher education, and the private sector.

We strongly encourage the Department to develop a portal providing web accessibility resources.

It would be burdensome to require public agencies to retroactively make all documents on their websites accessible, especially the many millions of older paper documents which we have converted to scanned images.

Even some materials which were originally created in electronic form a few years ago do not meet current accessibility standards. The same general principles that govern physical access should apply. All new or substantially

modified websites and content must be fully accessible. But, even existing sites and content should be made accessible to the extent this is readily achievable.

New challenges emerging in terms of digital accessibility that should be specifically addressed include access to social media sites, mobile devices, mobile apps, and secure health information systems.

We also wish to comment on regulations related to equipment and furniture. Standards for equipment and furniture, especially in the medical setting, should be put in place as soon as possible. Features to be required for medical equipment and furniture should include at least the following. Greater height adjustability, for example, for wheelchair users, wider chairs with flip-up arm rests, gurneys with rails, and bed rails that allow flexibility and positioning and facilitate transfers.

Scales that can be used to weigh those who are in a wheelchair or in bed, the controls on patient's controlled equipment such as insulin pumps and thermometers and on furniture such as hospital beds need to be usable by individuals who are blind or visually impaired.

Transfer options should include independent transfers, use of a lift, and staff assisted transfers. Staff who train patients in the use of a lift or staff who perform transfers need to be trained appropriately.

Adjustable beds are not necessary in all accessible hotel rooms, but a substantial percentage of such rooms should provide them. There should be an acceptable height range for nonadjustable beds, similar to the height range for toilets.

The access features in a particular room should be clearly identified, and the reservation system must allow guests to select and reserve a room that meets their needs.

Devices employing electronic or information technology displays and controls including appliances, video and audio equipment, and thermostats should be usable by persons who are visually impaired.

Whenever one or more information kiosks are provided, at least one should be accessible. I thank you for your attention to these matters. We will provide more detailed input when we submit written comments. Thank you very much

>> JOHN WODATCH: Thank you very much, Doctor Profaca. We look forward to your written comments. Next, we will hear from Steven Mendelsohn. Mr. Mendelsohn, please proceed.

>> STEVEN MENDELSON: Good morning. And, thank you very much for the opportunity of speaking here today. I wish to commend the Department for this initiative. It's a compliment that on the procedure it has adopted for obtaining broad-based input from the public as to the important proposals now before us.

I think it's important to put the question in context of what it means to update the ADA Title II and Title III regulations to meet the exigencies of the 21st century. And, what's important to remember in that regard is that what it means is nothing less than the ability to participate in society in all aspects and contexts. For, consider that without accessibility to the Internet and to electronic communication resources, without accessibility to equipment and furniture, without accessibility to the emergency next generation communication services that are being evolved, the possibilities for full participation are limited, so that we have not merely an inaccessibility in itself but we have without these opportunities an essential meaninglessness to all the other civil rights and all the other programs that have been developed to try to bring about equality for people with disabilities in our society.

What for example is the value of the legal right to access to government information if that information is provided on inaccessible websites or through inaccessible kiosks? What is the value of the right to use a gymnasium if the equipment in that gymnasium is inaccessible? What is the value of equal access to medical treatment if many of the diagnostic instruments are inaccessible, if many of the treatment modalities are unavailable by reason of the fact that they are inaccessible to people with one or another disability?

What are the value of employment programs if the technology that people increasingly need to use to work are not accessible? And, what is the value of educational equality as a legal principle if the educational system more and more is mediated through technologies, which are not accessible?

So, when we speak of accessibility, we are not speaking of something isolated. We are not speaking of something which matters only in its own life. We are speaking of something which increasingly in the 21st century is a predicate to any kind of participation in society. If any of the efforts we make, any of the values we espouse, any of the expenditures we undertake on behalf of equality of people with disabilities, on behalf of the creation of equal or nearly equal playing fields for people with disabilities are to have any real meaning, that meaning will be mediated by the accessibility of the electronic communications media, by the equipment, by the furniture and by the communications modalities that are necessarily involved in their utilization.

Now, I want to explain or express a concern that I have in that regard. It seems to me the Department, while we understand and appreciate its concern with anticipating concerns that may arise on the part of covered entities, its concerns that may arise with the burdens undue or otherwise that these new regulations may entail, that the Department has to be very careful to avoid going too far and anticipating difficulties that may not exist, in preempting the genius of the ADA in one respect, which is the way in which the existence of undue burdens can be asserted and identified, and if necessary litigated but at least addressed on an individual case by case basis. And, I'm very concerned that some of the proposals here, some of the proposed rules by tending to anticipate distinctions or problems that may or may not exist, will in fact introduce complexity into the system and indeed opportunities for gaming the system which are neither necessary nor productive.

I have every confidence that entities which find themselves aggrieved or burdened by one or another of their regulations will have ample opportunity to express their concerns, and as such, some of the questions which for example ask about whether or not in a couple cases in the regulations, proposed regulations, whether small entity should be exempted or given special exemptions, provisions in the descriptive video and audio acceptability NPRM, which involve for example the question of giving a blanket five-year exemption for 50 percent of the screens involved, that these, in an effort, in a good faith effort to be sure to anticipate problems, preempt the normal application of law and create opportunities for gaming the system, which may not exist. And in fact, reflect a degree of timidity, which is not warranted by evidences that are available to us. And, which if warranted, we can pretty well guarantee that affected entities will present on an individualized case by case basis where appropriate. Thank you very much.

>> JOHN WODATCH: Thank you very much Mr. Mendelsohn. We appreciate your comments. Next we are going to hear via the phone from Michelle Miller

>> MICHELLE MILLER: Hi, I'm Michelle Miller with Safer Building. And, my company has conducted hundreds of unbiased tests on nontoxic building materials and methods. And, as such, we hear from people all over the country that are interested in healthy home and office environments. Many of whom want a healthy life and many of whom are also chemically sensitive.

And, there are simple changes that will make a huge, huge difference to many people. Chemical sensitivity for the most part is an invisible disability. And so, if it were appropriate, leaders of various organizations could put together brochures that could help, brochures, people could carry cards that

were signed by physicians so that if somebody were stopped by a police officer or ambulance or some other 911 responder, the person would immediately be able to identify that this is one such person with this disability via a card signed by a physician, and they would have brochures to indicate protocols that would be more helpful. For example, the exhaust from fumes of ambulance and police cars and tow trucks is an issue. People who have been injured by chemicals frequently will have a severe reaction to toxins at much lower levels, levels than most people. And so, even though those fumes are harmful to everybody if they're closed in a garage and harmful to everybody at the low level, the reaction at the low level is what the difference is.

And so, it's important for example for ambulances and police officers and tow trucks to turn their engines off, because the fumes are so harmful. And, if it's not appropriate and that maybe they need it for a generator or something like that, at least they should be aware that, be aware of the wind direction and put the person in the car such that the person is not downwind of the fumes.

Another situation that comes up is fragrance-free personnel. And I've heard many, many times from people in the service industry. They feel fragrance is a personal choice. And, it would be if it only affected them, much like cigarette smoke. If cigarette smoke only affected the person doing the smoking it would be a personal choice. However, when people wear perfume, body wash, cologne, heavily scented deodorants, scented oils, hair gel, or if they wash their clothes in fabric softener, it has harmful effects upon other people.

At a minimum, since some people will likely refuse to be fragrance-free, there should always be somebody designated on staff that is fragrance free, an ambulance driver or police officer, so that if the issue comes up and the chemically sensitive person needs assistance, that designated fragrance-free person can come and assist and write the ticket or handle the person in the ambulance or do whatever is required.

The next thing that comes up is when we are stopped by police officers, the typical thing is people are asked to open their windows. However, it's frequently not safe for a chemically sensitive person and not only not safe, it could be very dangerous. For example, if there is a pesticide application that is nearby, if we are near a factory with fumes or a gas station and somebody opens the window, it could, the toxins would likely come in. It could cause a severe reaction.

Of course, the police officer needs to do his or her job, and so perhaps a solution, there is a lot of solutions but one solution would be once again, if a chemically sensitive person carried a card to show the officer and the

emergency responder had a brochure, they could designate, for example, a safer area with fresh air, and have the designated fragrance-free person meet there so they could do their business in an area that doesn't put the chemically sensitive person at risk.

And, the most difficult part of overcoming all these obstacles is with people that don't discover the affliction; it is extremely difficult to understand how dangerous it might be. For example, fumes bother everybody and they just think well just ignore it, it's not that much because they don't understand, and it's difficult for someone to put themselves in someone else's shoes, how severe the reaction is. And, sadly because of that, a lot of people will take it upon themselves to do a test. So again, long-term having training, long term training would be great. Short term, brochures with an outlined procedure would be effective.

Fragrance-free hospital staff, the same applies as what I said earlier. And, lastly, a lot of hospital rooms and nursing home rooms are not maintained in a toxic-free way. And, I'm not trying to plug my own company because that happens to be our area of expertise, not hospital rooms per se but nontoxic maintenance. But, aside from my organization, there is a lot of organizations that have protocols and procedures. And of course not every hospital room needs to be like that. But, at least if there were some in every hospital, or every nursing home, one or two rooms that were designated as safe, that would go a long way toward making it so chemically sensitive people could receive the services that they need. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate your comments today. Next we are going to hear from an old friend of the Department, Richard Skaff

>> RICHARD SKAFF: Good morning John and members of the panel. Am I on? I'm on. First I'd like to thank and I understand it's called the Department, so thank you for the hearing today. I guess my only request would be, well I have other requests, but my first request would be that we have more of this type of hearing out on the left coast. We have a very large population, an active population of people with disabilities and seniors who are not only intellectually stimulating, but knowledgeable in issues related to their function in the built environment, whether it's physical things or programmatic issues, or whatever.

So, I would hope that we could have you back soon. But again, thank you all for being here and taking the day to have this hearing. I hope you are enjoying your stay at the most accessible city in the country, San Francisco. I should first say that I, for those of you that don't know me, I started in this business, I guess you could say, over 30 years ago when I was trimming a tree at home and fell and became a paraplegic. I opened an independent

living center after leaving my vocation and avocation, the restaurant business, because I was told I wouldn't be able to come back as the manager and be in the dining room or the bar when the public was there, because in 1978, people didn't feel comfortable seeing people like me in restaurants.

In any case, moving along, I would like to read the slides and describe the visual portions of the slides. I felt it was necessary to do a power point, a visual power point. I apologize for those of you that can't see it. I'll try to do a good description of it but I felt it was necessary to be able to understand visually what I'm talking about.

Very quickly, the first slide talks about issues related to accessibility and equipment and furniture and whether they meet the needs of people with disabilities. Can individuals using large electric wheelchairs access non-fixed tables in restaurants, libraries, or other public buildings and accommodations with knee clearance of 27 inches? What about the accessible bar sections in restaurants and sinks in public bathrooms that are required to have knee clearances of 27 inches from the finished floor to the underside of the sink? Are those accessible bars and sinks and tables really accessible to people with disabilities?

And, I'll get to the table portion of this in a moment based on what ADAAG has said for years. Can persons who are blind or have limited vision operate mechanisms like telephone entry systems and kiosks and do we have any way of assuring that they will be able to? Can persons who have a disability that precludes them from grasping, twisting or pinching manipulate operating systems like fire alarm pull stations and some door locks or dispensing systems like women's sanitary napkin dispensers? Can everyone with a disability function in the newly created elevator system called Destination Elevators, which are a computer operated system that Walter Park spoke to and not only eloquently but with 2-1/2 years of experience in developing those guidelines, and I hope the Department of Justice will see what can be done to create those same guidelines on a national level.

Although we love it being the most accessible city in the country, we would like to bring along other cities and states throughout the country to do similar kinds of good work.

Can everyone including those in our aging population operate all doors in an accessible route including exterior doors? Presently, ADAAG requires interior doors to have a maximum force to operate of five pounds, which is considered accessible. Should exterior doors that can't meet the five pounds force requirement be required to use power operators to make them accessible? I was part of a very small group of people, three people that created new code a number of years ago, requiring exterior doors to be

accessible at five pounds, if they weren't able to, for various reasons, they are required to put in a power operator. Are there other systems that should be required that would be, that would make the built environment more accessible to seniors and people with disabilities? That is what I'm going to talk about now.

If tables, presently if tables are attached to the wall or affixed, then 5 percent of the tables or at least one if fewer than 20 are provided must be wheelchair accessible. This, as I said earlier, and all other shelf like systems including tables, dining and other in libraries, or systems like sinks, now require the 27 inches. In California, we have a requirement that the front lip underneath should be 29, going back eight inches to 27 inches.

Although I don't understand that, because I haven't seen anyone, oh, my goodness, I'm all through. I have a number of visuals. Can I take a moment or two to go through them?

>> JOHN WODATCH: Can you take, just sort of summarize them in a minute and then would you submit those to the record so we can include them in the record?

>> RICHARD SKAFF: I will. Thank you very much. The first one is the picture that is used and clearly defines what a fixed table is, in whatever occupancy.

There is a massive failure here, because we have restaurants throughout the country that have non-fixed tables, which aren't accessible because of the table bases.

Some examples of tables with accessible bases, and here's another accessible base, a flat foot, and tables that are not accessible because of the type of support system they use.

The next slide shows bathroom fixtures and the requirement, I'm sorry, for the lack of clarity on this but this is taken from California building code, which is the same as an ADAAG, the requirement for 27 inches clear underneath. Based on the type of equipment people with disabilities are using now, the historical 27 inches just does not make it so we have people sitting sideways. Same thing with drinking fountains. And then, if we can go to the next slide, something clearly needs to be done because the two on the right photographs show two different restaurants, one in Marin county, one in San Francisco, and two restaurants again, one in San Francisco, and one in Marin county with two different types of accessible bars and I say that tongue in cheek. The two pictures on the right show a lowered section of the bar that goes completely from the customer side to the employee side at 34 inches.

The two on the left have either attached shelf or no accessible section. This needs to be clarified. We also again have the five-pound door pressure need for exterior doors, which this next slide shows. We are also having the problem of older styles of hardware still being installed throughout the country that are not accessible like pinched locking systems.

Just recently, we had the state fire marshal decertify most of the fire alarms that they had approved to this point. This has happened within the last month. This picture shows what has been allowed that is now not going to be allowed. But I've got to say, one company has come forward, Simplex, they have now taken out this little pull lever and they have actually designed a lever to replace it at less than 50 cents a piece. They are going to go back and replace once they are feeling that it is truly accessible. They will replace all the existing.

I'll say the last slide shows multiple systems that are available and are accessible that aren't being used. We have a garbage chute which is powered by air, an air compressor in multi story buildings. We have kiosks that sell product that use a touch screen, not accessible. This is the picture that Walter Park talked about, the accessible telephone entry system. We have a brand-new, a month or two old female sanitary napkin dispensers that doesn't require grasping, twisting and pinching. The industries that deal with operating mechanisms have been trying to find a definition so they would not have to remake their systems. So they have tried to redefine what tight grasping, twisting, and pinching means in order to find a way to not have to rebuild their systems. The problem is we have people that will never be able to operate those systems. Here are some that are the problem.

We have throughout the country, one back; we have portable equipment like the toilet I'm showing on the slide, the portable toilet that outside of California is not used. Lastly, I would suggest that the Department of Justice in some way has to find a way to do additional research.

We need to look at the built environment and actually do some research in a greater and more extensive way to assure that the products we are getting today don't just have the ISA on their marketing product but are truly accessible.

The other thing I would like to ask from the Department of Justice is more help with enforcement. We have a huge failure by the licensed folks, the architects and contractors. We have a huge failure by building departments throughout the country, not just in California. I'm fighting, finding what is called a pattern and practice in non-complying enforcement from building departments across the state. And, I would ask the DOJ start looking into that. Thank you for allowing me to speak.

>> JOHN WODATCH: Thank you very much. Next we are going to hear from a long time associate of the Department as well, Lainey Feingold. We're honored to have you here.

>> LAINEY FEINGOLD: I'm honored to be here. Thank you. My name is Lainey Feingold. And, I've worked on issues of web access with the blind community since the 1990s. Along with co-counsel, Linda Dardarian, who will be testifying next and blind organizations and individuals including the ACB and AFB, I've negotiated web accessibility agreements with some of the largest ADA covered entities in the United States. I also maintain a website for my own small law firm with the URL, LFlegal.com. I'm here today to talk fast and comment on the ANPRM, as fast as I can, talk, comment on ANPRM regarding web access. And, I thank the Department for providing me this opportunity. I'd like to speak about two principles that I hope will guide the Department as it drafts regulations on this critical issue. The first principle is, please do not, and you don't need to, reinvent the wheel as you are drafting these regulations. And, the second principle is, please remember that every limitation, every month of delay, every exception that you build into these regulations can serve as a do not enter sign on the side of the information highway.

What do I mean when I say please don't reinvent the wheel? First, robust internationally recognized technical standards already exist to ensure that websites work for people with disabilities. I urge the Department to adopt those standards, the web content accessibility guidelines 2.0 level double A as a technical standards for Title II and III web access. Second, the Department already has shown that performance and technical standards can work together. I urge the Department to adopt a generalized performance standard in addition to, not instead of, in addition to the technical standards of WCAG 2.0 AA. This two pronged approach has a proven track record in the built environment and it is going to work in the virtual environment as well.

Another recreate the wheel issue, WCAG is already being used by covered entities and has been so for many years. Examples from my own work and that of my co-counsel, Linda Dardarian include the following. In 2000, Bank of America with the California counsel of the blind signed the first agreement in the country referencing WCAG. That's 2000, over 10 years ago. Many other banks followed suit. In 2008, the three United States credit reporting agencies began using WCAG to guarantee accessibility of free online credit reports. Online financial information involves heightened security and privacy, including captchas. WCAG has worked well as a technical standard in these environments. In 2009, we worked with CVS and Rite Aid and got signed agreements to use WCAG on those complex retail sites. And, in 2010, Major League Baseball began using WCAG 2.0 level AA for both MLB.com and the websites of all 30 major league baseball teams. WCAG is

already rooted in the public and private sector in the United States and abroad. And, the Department should not recreate the wheel and develop a new or use a different technical standard.

Another recreate the wheel issue, the Department already has detailed undue burden regulations that take into account an entity's size, financial resources, number of employees and other factors. The Department should not develop new defenses or carve out exceptions based on website or entity size or type. And, that brings me to the second principle, which is as you're drafting these regulations, please remember that any exception to full accessibility of all content on the Internet is a do not enter sign for people with disabilities.

Do not exempt small businesses. I can tell you from personal experience, a business size is not a predictor of the ability to build an accessible website or maintain it as accessible. I encourage you to visit my site at LFlegal.com, which is a WCAG AAA site that was included in the 2.0 implementation report. Do not have blanket exemptions for social networking sites, on-line marketplaces, or any other category of website. Remember, Uncle Joe may want to sell his old fishing rod on e-bay, but Title III entities also use a site to conduct businesses.

Aunt Ann may use Facebook to share recipes but universities and colleges that are already covered entities are using Facebook to conduct classes. Just yesterday, the New York Times had a story that classes use twitter and improve the GPA of students sanctioned tweeting during classes. 19 million people are friends with Starbucks, a covered entity on Facebook. Please remember that people with disabilities might well be the occasional seller or private individual who wants to share photos that you talk about in the ANPRM. Aunt Ann may be blind and Uncle Joe may have a different disability. You are writing these regulations in part for them. One of the biggest do not enter signs potential is delay in implementing these regulations. Your two year proposal in the ANPRM is just too long. Implementation should be swift and immediate.

In 1997, Tim Burners Lee, widely considered the inventor of the Internet announced a launch of the web accessibility initiative with these words. "The power of the web is in its universality, access by everyone regardless of disability is an essential aspect." Every single day since this iconic statement was made, Title II and III entities have provided increasing amounts of service program and information online in every context imaginable.

1997 was 14 years ago. In many ways, the Department is playing catch up with these regulations. Today in 2011, the Department has a historic

opportunity to make the promise of the Internet a living, breathing reality. I urge you not to let the opportunity pass. Thank you very much

>> JOHN WODATCH: Thank you, Lainey. Next we will hear from Linda Dardarian.

>> LINDA DARDARIAN: Good morning. My name is Linda Dardarian. I'm a partner at Goldstein, Demchak, Baller, Borgen, and Dardarian, one of the oldest private civil rights law firms in the country. And, I'm the other half of the Feingold-Dardarian team. For the past 15 years, Lainey and I have been representing the blind community in negotiations with the largest financial institutions in the country to create and implement talking ATMs and have worked on making other flat screen kiosks and information technology accessible to people with visual impairments.

I thank you for the opportunity to address you today on the equipment ANPRM and I ask you to not delay in requiring that all electronic and information technology be accessible to people with disabilities now.

Two decades ago when enacting the ADA, Congress expressed its intent that the accommodations and services provided to individuals with disabilities would, "keep pace with the rapidly changing technology of the times."

We are here today because that has not happened. What has happened in the past two decades is that businesses and institutions have moved away from having live personnel provide services to customers, patients, students and others, and switched instead to touch screen self-service kiosks and ATMs which have allowed businesses and institutions to cut back on staff, and save significant personnel costs and increase operational efficiencies.

These machines are commonly used for everything from banking transactions, ticketing, bill-paying, grocery purchases, and appointment registration as well as hotel check-in, class registration, medication dispensing and other every day services.

But touch screen machines are inaccessible to people with visual impairments and others who cannot read the information and instructions that are on the touch screen, or cannot locate and touch the place on the screen to input information or select options.

People with disabilities are therefore either shut out of these services, or they are required to become dependent upon other people to input their private and confidential personal identification numbers, and other sensitive financial, health or personal information at the risk of their safety and their dignity.

This should not be the case 20 years after the ADA. This should not be the case because as the Department recognizes, the law already requires the provision of accessible equipment. This also should not be the case because accessible equipment already exists on the market.

For more than ten years, major ATM manufacturers have been making talking ATMs that deliver all instructions and information for use privately through an earphone jack and have tactile controls for all inputs.

These talking capabilities are part of the standard ATM package these days, and there are more than 100,000 talking ATMs in place throughout the country.

Major equipment manufacturers like IBM also make self-service kiosks that are similarly accessible to people with visual impairments, as evidenced by the easy access self-service kiosks that are in place in post offices throughout the country.

The same hardware and software that make these kiosks accessible to people with visual impairments can be applied to other electronic information technology at minimal to no extra cost.

Accordingly, we urge the Department to issue regulations that clearly stress the urgency of installing accessible self-service kiosks, ATMs and similar equipment. As detailed further in the written comments that we will be submitting, we ask the Department to adopt technical and performance standards for these types of equipment that are similar to those in section 707 of the 2010 standards for accessible design, as well as the technical standards in Section 508 of the Rehabilitation Act.

And, we ask that these standards be made effective without delay. Moreover, accessible EITs should be required everywhere. Every machine should be accessible. That should be the norm. That should be the standard. If meeting this 100 percent requirement would be an undue burden for any individual entity, the entity can demonstrate undue burden on a case by case basis.

But the expectation 20 years after the ADA should be access now, access everywhere. This will ensure that people with disabilities keep pace with emerging technology, as Congress intended. Thank you

>> JOHN WODATCH: Thank you very much. That was exactly five minutes. (Chuckles). Our next commenter is going to be on the phone, and it's Dr. Sean McCloy.

>> SEAN McCLOY: Hi, this is Dr. McCloy. I'm a family physician in Portland, Maine. I see a number of different varieties of medical conditions, one of which is electromagnetic sensitivity. And, I just wanted to speak a few minutes on that, and this relationship to smart meters.

I was fairly skeptical of the existence of electromagnetic sensitivity when I first heard about it and when I got my first few patients coming to my practice. But, I did a little reading and a little research and it seemed there was some biological plausibility in the data out there and it just hasn't really been well studied. So, I kind of took the problems with the grain of salt and treated my patients with the best compassion I could.

But as I started to see these patients, and read more and more, I think there is some emerging evidence that demonstrates that this is a real phenomenon, and is still poorly understood. The way I kind of explain it in my own brain is that there is a wide spectrum of susceptibility to the environment, different environmental factors. Some of us on one end of the spectrum are ironclad and bulletproof and we can take in any toxin and have any exposure and not really feel the health effects. At the other end of the spectrum are very sensitive individuals who are vastly affected by small doses of a prescription medication, for instance, or who just are very sensitive to their environment.

And, I think that electromagnetic sensitivity probably falls into this range of the spectrum. Now we're understanding the genetics and biology behind this a little better. I recently spoke before a public hearing on smart meter installation in Maine. There's a large initiative to replace the regular meters, the analog meters with the smart meters. And, we are seeing the emergence of some people who are having health problems as a consequence of the smart meters. And this is in lieu of other medical conditions that have been ruled out, including psychological ones.

So, my overall point is to approach this new technology using the precautionary principle in that any new technology which is going to be rolled out I think should be proven to be safe before it is initiated. Whereas currently, we seem to have a general standard of bring the new technology forward, and then wait for harm to happen, and try to accrue enough information about harm to take that technology off of the market.

A good example is prescription medications where you have to have a new drug come out and hit the general population before rare side effects show up to the point where that drug is taken off the market. I think it would be better for the public health to prove safety absolutely first, before the new technology is put in place. Many countries around the world are beginning to take this precautionary principle to heart when approving new technologies. I think the same should apply to smart meters.

There is a growing body of evidence of potential harm of smart meters. Nothing has really been proven to be safe or proven to be harmful. But applying the precautionary principle to this, I think the smart meters need more research before they are broadened to general use and expose the public to them.

That's it. Less than five minutes. How's that? Not bad. Thanks very much.

>> JOHN WODATCH: Thank you, Doctor McCloy. We appreciate your testimony and its brevity as well. Next we will hear from Sheri Farinha from the NorCal Services for the Deaf and Hard of Hearing. Welcome.

>> SHERI FARINHA: Hello, it's good to see you all again today.

My name is Sheri Farinha. I'm CEO of NorCal Services for the Deaf and Hard of Hearing. We are a nonprofit community-based organization serving deaf and hard-of-hearing people in 24 northeastern counties in the state of California.

I'm also Chair of the EF 911 stakeholder's council, under TDI, Telecommunications for the Deaf, Inc., and also the secretary for the National Association of the Deaf. Thank you.

I'm pleased to have the opportunity to come and provide feedback to the ANPRM. Thanks so much for doing that, by the way. Specifically, I'd like to address direct communication access to 911 via Internet-based telecommunications.

You've already mentioned in your ANPRM that we have access via TTY or text, captioned telephone, but TTYs are being so much more less used today, and more people are using Internet-based telecommunications.

So, we are asking that, let's pave a road for the next generation 911 no matter what kind of device, that any individual who is deaf or hard-of-hearing uses, that that access has to happen. To pick which device is better over another doesn't seem to make sense at this time. It needs to have access to all devices. That is what is important to us. We are advocating for indirect versus direct communication. Indirect means video relay services, or IP relay, or captioned phone calls via Internet.

It's a type of Internet call that does take place. What we have right now is not an ideal situation. We would ideally advocate for direct services. Now video phones would be able to be supportive in doing direct services with having a split screen with a certified, qualified interpreter at the same time showing the PSAP call taker. So, they could access the emergency services.

Also, we are in support of the need for an interim service to be in place while working towards the next generation 911. Right now, in Sacramento County, we have the SAC PD offers 911 pager services for deaf constituents in the county.

It's critical and it has served as a lifesaver on many occasions. We were able to e-mail directly to 911 services to get assistance when needed. Oftentimes, deaf people find themselves in a threatening situation and have no access while on the road.

So, what we, any mobile device is able to access that 911. So I understand SAC PD is going to be coming here today and that pager service can be used as a model for an interim purpose. Ideally, it would be real-time text with the next generation 911, because that would allow for interactive, instantaneous interactive mobile devices to 911, as well as video. More and more mobile devices are including video devices at this time.

So, I understand that we do have access to use that service. I want to also mention that the reverse is true. If the 911 pager is set up, it's cost efficient, and we suggest that you use that, as an approach. The reverse is also true. 911 can reach the deaf community for emergency notifications in a given area. That would be something else to consider.

Now, for video interpreters, it's important that you receive your certified qualified interpreters that are to be used, not only the existing systems that are in place with video relay services. You might consider hiring deaf people to be call takers at the 911 center as an option.

There is a lot more that I want to say. But I understand time is short. And, I just wanted to hit on some basic points that are important to the deaf and hard-of-hearing individuals and make access happen, and do not let history repeat itself and leave us behind. Thank you so much.

>> JOHN WODATCH: Thank you very much. We appreciate you coming today and sharing your testimony with us.

Next we will hear from Silva Yee from the Disability Rights Education and Defense Fund. Welcome.

>> SILVA YEE: Yes. Thank you, I'm happy to be here. John, I would like to thank the Department for the issuance of the ANPRMs and for the opportunity to speak. While I will be specifically addressing the medical equipment and furniture ANPRMs, later in the month we will be submitting comments to the Department for the entire ANPRM on equipment and furniture.

DREDF does strongly support the Department's issuance of detailed technical accessibility requirements for medical equipment and furniture in all medical facilities. Today I would like to provide just a couple of reasons for why such regulation, including scoping requirements, is necessary and three overarching recommendations for the content of that regulation.

First, outpatient healthcare services in non-hospital settings are extremely significant for people with and without disabilities. The national ambulatory medical care survey found that ambulatory medical care in physician offices is the largest and most widely used segment of the American healthcare system. In 2006, over 900 million visits to office based physicians took place. And, over 50 percent of these were made by patients who had one or more chronic conditions such as hypertension, arthritis or depression.

Outpatient physician services ranged from primary care to highly specialized surgical and medical consultations and care. And approximately four-fifths of these services took place in a range of physician offices such as private practices, urgent care centers, public health centers, family clinics, mental health centers, community health centers and family practice plans.

In addition, 83.4 percent of the visits surveyed were to practices either owned by a physician or a group of physicians. While inpatient medical facilities are explicitly addressed in Title II and Title III regulations, outpatient facilities are not addressed in so far as architectural equipment or policy elements.

As the National Council on Disability has noted, it is critical that offices involved in delivering ambulatory care for physically and programmatic, be physically and programmatically accessible given the wide ranging types and amounts of service delivered in these offices and clinics.

The second reason is that accessible medical equipment is profoundly absent from outpatient offices and clinics. There is in fact very little hard data to support this, because not much is known about what is actually in those private physician's, doctor's offices, the policies that are going on or the fact that there may be no policies.

However, disability advocates in California have worked with a few health plans in California to administer a 55 item questionnaire designed to assess disability access. The questionnaire was administered to their primary care provider networks and was administered between 2006 and 2010.

This recent study used, and I will be handing you a power point later on that details more of what is in the study. The study used 2,389 reviews of primarily urban sites, primary care providers. The primary care providers surveyed had specialties in general medicine, internal medicine, family

practice, pediatrics or obstetrics and gynecology. The questions addressed a variety of elements, including architectural ones but I'm going to be focusing on the questions relating to exam tables and weight scales and examination rooms space. The findings on the availability of accessible equipment are stark. Across all primary care specialties and locations surveyed, 8.4 percent have an accessible exam table and 3.6 percent have an accessible weight scale.

The percentage of practices that have an examination room with sufficient clear floor space for a person using a wheelchair and with no door that swings into the space is a little more encouraging. 89.6 percent in urban offices and 97.6 percent in rural offices.

General medicine practitioners consistently had the lowest, the smallest percentage of accessible tables – 8.4 percent. And accessible scales – 2.2 percent. OBGYN was a little better, 18.4 percent accessible tables and 10.3 percent accessible scales. These findings were made 16 to 20 years after the passage of the ADA. The surveys were administered in California, arguably a state that has a higher degree of architectural accessibility, greater awareness of accessibility needs and a lengthier history of accessibility legislation than many other states. It would be very surprising if the numbers on accessible equipment are any better in any other state.

Also keep in mind that the accessible equipment being surveyed consisted only of exam tables and exam and weight scales. Two of the most basic tools used in medical care, and both of which existed in readily available accessible versions of the time. I'll finish my paragraph if I could.

The logical conclusion is that providers, even those who may be well-intentioned about providing accessibility are disinclined to take concrete steps to provide access unless the required actions are clearly defined, explicitly regulated, and incentivized either through the stick of enforcement and/or the carrot of tax breaks or deductions. I see I have not gotten to my three recommendations. However, they will definitely get to you. I will hand the slides to –

>> JOHN WODATCH: We look forward to looking at the information you are providing us today and the comments that you will be providing us. We will take special care to look at your recommendations.

>> SILVA YEE: Yes. They are very detailed. Thank you.

>> JOHN WODATCH: Thank you very much. I believe our next commenter will be via the telephone. This is going to be Alexis Kashar.

>> ALEXIS KASHAR: Hello. Good afternoon, everyone. My name is Alexis Ander Kashar. I've been a civil rights attorney for over 17 years. Thank you for this opportunity to provide comments today.

I'm testifying today on behalf of the National Association of the Deaf, the NAD, as chair of its civil rights committee. And, I will provide comments with respect to the NAD's position on movie theater captioning.

The NAD really appreciates the Department of Justice's efforts to bring the law up to date. Movie attendance has become a big part of American culture.

Just like everyone else, we want to attend any movie, in any theater, at any time. Of course, this means equal access through high quality and reliable captioning.

The NAD on behalf of the deaf and hard-of-hearing communities respectfully request that the Department require movie theaters to provide captioning for 100 percent of the movies shown in 100 percent of audience-driven theaters of the auditory experience in their facilities. The Department's proposal to require only 50 percent of movies or 50 percent of movie theater's auditoriums to be equipped with display captioned in five years is unacceptable.

Even with today's technology, available, has been available for a long time, many large theater facilities do not have a single theater with captions. A famous American actress, the youngest Oscar winner to win for the best actress, and one of only four women to win the Oscar for their first time on film, Marlee Matlin, completely agrees with this position.

Can you imagine even she herself does not have full access to the movies? Her own profession. I want to share some personal experiences of mine.

During a recent trip to Orlando, Florida, I went to two major movie theater complexes, the AMC at Downtown Disney, and the AMC at City Walk.

Both complexes had over 20-plus theaters, and neither had any captioning equipment available at all. The technology exists. So, the day has come for movies to become accessible to all. Not providing access is equivalent to posting a "no deaf people allowed" sign, equivalent to not requiring bus lifts, because, simply because they are inconvenient to all others involved.

Technology has evolved. Movie studios had movies captioned for years. The accessible product is there, and has been there in front of us. The movie theaters are not showing them. Department guidance must recognize

the difference between limited captioning technology that existed in the '90s, and the captioning technology that is available today.

New technology often requires new terminology, and the NAD respectfully requests that the Department adopts the following terminology: Opened captions to refer to captions that cannot be turned off. Closed caption refers to captioning that may be turned on and off. That includes existing caption projection systems and new digital cinema systems that can select the display of captions and other features.

I want to give you an example of how this specific type of closed captioning is already being used. For example, the Universal Studios in Orlando, they have a remote type of clicker that is given out to those who require captioning, to allow us to turn on the captioning on the TV screens that are part of the attractions.

This captioning is then seen by everyone in the room. The third term I wanted to describe is individual captions that refer to captions that require the use of ancillary equipment by the individual viewer. This includes system such as rear window captioning, RWC, and other systems in use and under development

>> JOHN WODATCH: Ms. Kashar, could you summarize the rest of your comments for us please?

>> ALEXIS KASHAR: Okay. While I appreciate the frequency and the flexibility of the RWC, we have to be aware that that is not the answer. It is not easy to use and it has a high failure rate. There are so many times to find out that I go that it's not working. So imagine the thrill of going to the theater and buying popcorn with your pop sitting down only to find that you can't enjoy the movie. And, that has happened countless times, that I have become too familiar with the movie managers for this reason. Okay.

Not only am I affected but my family and my children and their friends are impacted by this as well. Therefore, in closing, the NAD encourages the Department to require compliance with the ADA and that movie theaters provide captioning as defined in my testimony, at all times. Thank you for allowing us, The National Association for the deaf and the deaf community to be heard with respect to this life-altering issue. It's time to liberate the deaf and hard-of-hearing. Thank you again.

>> JOHN WODATCH: Thank you very much. We appreciate your comments today. Next we will hear from Ann Cupolo-Freeman.

>> ANN CUPOLO-FREEMAN: Hello.

>> JOHN WODATCH: Good morning.

>> ANN CUPOLO-FREEMAN: Good morning. Good morning. I am a retired medical social worker. I have worked in hospital-based rehabilitation programs at the Berkeley Center for Independent Living since 1976.

My comments today are based upon my own experiences trying to access certain services and those of the clients and of my friends, but the clients with whom I work in particular.

I thank the Department of Justice for recognizing that all of these topics would benefit from additional regulation. And, I'm here today to talk specifically about the need for additional regulation regarding medical equipment and bed heights in hotels.

We wouldn't tolerate people in any other segment of the population. We wouldn't expect people in any other segment of the population to tolerate not being able to book a hotel room because their bed was too high or to accept an inadequate medical exam because they could not get onto a table.

But it seems that people with disabilities are being expected to accept or to deal with the lack of access in these areas.

Regarding medical equipment and furniture, regulations are definitely needed for equipment including but not limited to exam tables and chairs, wheelchair accessible scales, radiological diagnostic equipment, dental chairs, infusion recliners and mammography chairs.

I'm aware of many situations where many people with disabilities absolutely do not even have access to providers of the community unless their provider has some inaccessible equipment. For example, tables: When I worked at the hospital, we made referrals to a variety of independent healthcare providers. The most common question asked of me by patients was to help them find a primary care physician or gynecologist with a height adjustable exam table.

I can rarely help them with this request because virtually none of the physicians in our community had or even have height adjustable tables. Or the staff willing or able to significantly help many of them get onto the exam tables that were too high. Many people were told to bring their own assistants to put them on the table. We had an accessible wheelchair scale in our rehab department. Our scale was well used because wheelchair users who weren't even our clients came to us to get weighed because no one in the local medical community had one. My own physicians did not have a height adjustable exam table or scale. Patients who couldn't transfer to a too high table were again here told to bring someone to lift them.

Because of my small size I was able to be helped onto tables if they weren't extremely high. But that wouldn't work for the average size wheelchair user. I would continually nag them to get height adjustable tables. I brought written information about tables that were on the market. And, I also brought information about tax incentives for purchasing them. One of my providers actually did finally purchase two tables, and told me that they worked really well for other patients as well, like pregnant patients. If there were regulations about these things, we wouldn't have to get into adversarial relationships with our providers and we could just be patients like everybody else.

In regards to bed heights and accessible hotel sleeping rooms, many of us, as you have heard, who reserve accessible hotels rooms are finding upon arriving that we can't get on or off the bed. This is happening more frequently because the lodging industry has been installing luxury mattresses which raise bed heights to about 25 to 30 inches, which is of course notably higher than the beds previously found in hotels.

With the average wheelchair seat height being around 19 to 20 inches, this clearly makes these beds inaccessible. So, people of short stature such as myself are at a significant disadvantage when we encounter them, unable to transfer into such high beds. This was also raised by some of our rehab clients.

So, I'd recommend that the beds in accessible rooms measure between 20 and 23 inches from the floor, that there is maintained a 7 inch clearance under the bed for lifts, required beds be movable rather than attached to a wall or on a stationary platform so they can be moved to create an accessible pathway to the bed and to have information about heights of the beds readily available on the property's website and with reservation department at the front desks. As our population ages, accessibility in all these areas will be needed by more and more people. Thank you today very much.

>> JOHN WODATCH: Thank you very much. Our next commenter will be on the phone, Elizabeth Barris.

>> ELIZABETH BARRIS: Yes. Hi, this is Elizabeth Barris. And, although I'm sort of unclear exactly of what the hearing is for, I was asked to testify about the American disabilities in relation to my own illness of electro sensitivity. And I'm not sure if you are thinking of bringing a bill to provide new wireless technology for people with disabilities. I'm not really clear on what this is. However, I will speak to my own illness and my own disability.

If you are thinking of bringing wireless technology to help people with disabilities, you should actually consider the people that have disabilities due to wireless technology.

So, I used a cell phone for about 15 years. I have become very, I had an MRI and they didn't see anything. I know the latency for cancer is about 30 years. So, I'll still be worried. But, I've had really bad problems on the left side of my head, where I used my cell phone and I stopped. And, the pain went away. It still comes and goes intermittently when I get around things like Wi-Fi and other people's cell phones.

However, it started to come back about in the past six months, and I didn't know why I was getting constant ringing in my ears and constant pain in my left ear. I went to the doctor. Actually, I have precancerous cells somewhere. Anyway. And then, I noticed the plants outside of my door were dying. And, I put it all together. And, I said, this cannot be.

So, I measured the radiation in my apartment and it's very high. It turns out that, and I looked all over. I couldn't find it. Finally, I got a friend to help me. There is a cell tower about a block away from my apartment that has 25 transmitters and antennas. I was never notified because I'm not in the 50 to 100 feet from it. By the way, there is no federally established RF regulation for this stuff. It's a free-for-all right now.

These things are being installed, irregardless of human health, only looking out for the cell phone industries profits and of course the government taxes on everything that they make a lot of money. There is a lot of money here. And, public health is not being considered at all.

I can no longer go into, because of this cell tower, I have now become even more electro sensitive than I was when I was just using my cell phone. I can't go into places with Wi-Fi now like Starbucks and things like that. I can't stay there for more than a very short amount of time or I get very bad pains in my ear and I have to leave.

Now, because of my situation with my apartment, because I'm being constantly bombarded by this radiation, and by the way, non-thermal effects are completely unregulated, not considered even cell phone safety standards of the SAR, the specific absorption rate. There is a lot of pulse modulation in my apartment, which, I don't know if I have time to explain what that is, but if you take a jackhammer and you put it on a block of cement and you press down, nothing will happen. If you turn the jackhammer on and it starts going up and down, it breaks the cement apart.

So, that's what pulse modulation is to our cells. It's constant bombardment on the cell and eventually it will do something to it.

So, that's just one non-thermal effect that is totally unregulated. Frequency is totally unregulated also. The only thing we are regulated about is heat that is your head baking like a potato if you live near a cell tower. It is really, really bad.

So, I really urge and beg for my own health and believe me, I know you may, you're going to be hearing more and more of me, the more and more of the young, 3 to 5-year-olds are marketed to with cell phones. The more population is being exposed at an earlier age, the more that we're going to be having this huge problem where people can no longer go into even public places that have this technology. It is becoming a -- okay. So, I have a minute.

So anyway, just the short term monetary gain that is from the rollout of this technology, the abandon, the Wild West type abandonment of all health concerns with this technology is going to be dwarfed in a major way by the impact that it has on the public's health. And, I really urge the committee not to roll out more wireless technology. Please consider people that are becoming electrically sensitive like myself, with the Americans with Disabilities Act. I don't know if it's considered a disability yet or not. I don't know anything about this part of it really.

But, I do have this disability and it has actually inhibited my lifestyle quite a bit. And, I also now have to put thousands of dollars that I don't have into buying protective shielding to protect the area where I sleep in my apartment, because when you sleep, your melatonin, it's a melatonin inhibitor. Okay.

>> JOHN WODATCH: Thank you very much. We appreciate you taking the time to speak with us today.

>> ELIZABETH BARRIS: Sure. Is that it?

>> JOHN WODATCH: Yes, thank you.

>> ELIZABETH BARRIS: Thank you. Bye.

>> JOHN WODATCH: Next we are going to hear from Andrew Phillips. Mr. Phillips?

>> ANDREW PHILLIPS: Hello, everyone. My name is Andrew Phillips. And, I'm here to speak on behalf of the National Association of the Deaf on the position of movie theater captioning.

I enjoy movies as much as anyone else. But, I, like other deaf people, experience very limited options than non-deaf people who can attend any showing at any time of the day, at any theater, at any day of the week.

I and other deaf people are limited to specific showings on limited days of the week and at very limited times. As an example, this past Thanksgiving while visiting my family in the L.A. area, we wanted to see the new release of the Harry Potter movie, but we could not find a captioned showing in the L.A. area. We had to drive over an hour to find a theater that was showing it with captions. I felt very bad putting my family through that, having to drive that such a long distance so that I could be part of the movie going experience. And this happened in Hollywood of all places.

Along with NAD we respectfully request that all movie theaters be required to provide captions in all theaters for all showings. I recently graduated from UC Hastings School of Law here in San Francisco. And, as I'm sure several of you, if not all of you know, the life of a law student is a very busy one.

And, it's not frequently that you have discretionary time to go to movies. The movies that I most wanted to see did not have captions showing playing during the time that I had free to see movies. This is another example of how limited our choices are, as people who are deaf or hard-of-hearing.

It isn't just having captions that make a movie accessible. In order for the captioning to be successful, it has to be clear, visible, high quality, and with high contrast to its background.

Just as an example, a few years ago, a group of friends and I went to see the sequel to the Matrix movie, Matrix Reloaded. And, there were 15 minutes there when we could not understand the captions. There is a very famous speech given by the guy who is referred to as the architect of the matrix. It just so happened that his costume was completely white. The lettering in the captions was completely white, with no shading or outline around the letters to distinguish them from the background. So, my friends and I were even more confused than the other audience members when we left the theater, not knowing what had happened.

We feel the Department should also require movie theaters to implement policies and practices that would include training of employees in use and maintenance of the captioning equipment or the caption displaying equipment.

Not long ago, a friend of mine and I went to watch a movie, down in the peninsula, south of San Francisco, and on-line it was announced that rear window captioning would be provided. So, we decided to go but we did double-check with the theater. We called ahead of time and they confirmed

that they had rear window captioning. This is about a 30-minute drive to get there.

The movie started, but the rear window captioning did not. The equipment was not on. So, I went to the theater staff to ask what was going on and they said oh, well nobody here is trained to turn the machine on. I'd like to thank you for the opportunity to provide testimony today on behalf of the National Association of the Deaf.

And the NAD will be providing further comment in written form. Thank you

>> JOHN WODATCH: Thank you for coming and sharing your experiences with us. I have to point out that I saw that movie, and I got to listen to the speech and I'm still not sure what it meant. So, maybe we can get together and discuss that. (Chuckles).

Our next commenter is going to be on the phone, and is Daniel Grover. Mr. Grover?

>> DANIEL GROVER: Yeah, hello, can you hear me?

>> JOHN WODATCH: Please proceed.

>> DANIEL GROVER: Thank you. I'm a wheelchair user and travel extensively for 25 years. I'm a wheelchair user, and since I'm on the phone and all you have to go by me is my font there and my name, I just want to assure you that I'm wearing a suit and tie and look very, very professional today. I just want to say that transfer height has already been established in numerous 2004 ADAAG chapters. Transfer height does not affect, oh and I'm talking about the ADA bed height in hotels and places of public accommodation. So, I want to say that transfer height does not affect the usability for the non-disabled population that may end up using a hotel room that is not in use by somebody with a disability.

And currently, if I stay in a hotel, I can transfer to the toilet. I can transfer to the shower. And, I can transfer to the swimming pool, but the main reason why I'm there to sleep in a bed, I can't transfer to it.

And, in the 2004 ADAAG chapters, chapter 6, water closets, seats, bathtub seats, shower compartment seats, benches, amusement park rides, play areas, swimming pools, wading pools, they all have established transfer heights already. So, since transfer heights have already been established for accessible elements, it just seems only reasonable that they should apply to a bed.

And, I don't see that there was, like I said, I don't think that it affects the nondisabled population that would end up using the hotel room. With a bed, there is consideration for the fact that a bed gives and fluctuates with weight, when you are attempting to transfer on it unlike all those other elements which whatever height they are, they are fixed and solid.

So, but that being said doesn't mean that you should not establish a transfer height for a bed. It's been my experience in the industry that there's a superficial look of a high bed that for cosmetic reasons equates to quality. I've run into that numerous times when staying somewhere.

The function of a bed should not be high, you know, for cosmetic reasons.

And, the other thing along with transfer height in beds is, I also experienced very often that in smaller hotels that have one room that's accessible, they put in one king-size bed. And, today we are not talking about the size of the bed. We are talking about transfer height. But, when there is not a two-bed option, then when I stay with four people in a room, it makes it very difficult. That's a side note.

So, my main point is to implore that transfer height has already been established in numerous ADAAG chapters, so it should certainly be applied for transfer heights in beds. And that's all I have to say today.

>> JOHN WODATCH: Thank you very much. We appreciate you commenting with us today. We are going to conclude our morning session with one more commenter, who appears to be appropriately named for this function. We will turn this over to Carrie Finale.

>> CARRIE FINALE: Thank you. I just want to thank the panel for allowing me to speak today.

Just a quick introduction. My name is Carrie Finale and I was injured in a car accident in '97. And, I suffered a spinal cord injury. And, it took me, so I'm paralyzed from the waist down. And, for the ten years post injury, I struggled physically and emotionally and mentally. And I was an athlete my entire life so there was a big hole missing for me for ten years, until I discovered wheelchair sports. So, for the last four years, my life has completely turned around in a positive direction because of being fit and wheelchair sports. So in order for me, and in fact, I'm on the U.S. Para-Olympics cycling talent pool team and I travel a lot in various hotels. So, having access to equipment in gyms is very important to me in my fitness, in order to perform at races.

And, I find that at home here, I'm limited to the amount of pools that I can swim in. I can't just transfer down to a pool deck. I need an actual lift that I'd

like to be able to operate independently. I've been to pools where they pull, you have to ask someone and they have a portable lift that they roll over and you transfer into. For me, that's, I'm not able to operate that independently. So independence is huge for me.

Another issue I have with gyms is, okay, so I do find a pool, but there aren't any exercise equipment in the fitness room that I can use as far as strengthening my upper body. And, the gyms still wants to charge me full price.

So, if I had access to everything in the gym, I could understand paying the full price. So, the other thing I want to say is that the showers, the showers aren't always accessible in there. The levers to control the water in the shower heads are usually a little bit too high for someone who is sitting down or way too high. And, I also and lastly, I just want to say I spoke to one of my friends who is quadriplegic, and he said add in there changing tables for the people who can't dress and undress in their chairs. A changing table with an accessible stall for them to get in and out of their bathing suits would work.

And with that, that's what I want to say. Enjoy your lunch.

>> JOHN WODATCH: Okay, thank you very much. We wish you good luck in your competitive career. We will conclude now the morning session. We will reconvene at a different time. We are going to reconvene at 1, because of the unprecedented demand of people who would like to comment. We will be back here at 1:00. Thank you all very much.

(Break).

DEPARTMENT OF JUSTICE HEARING

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>> I understand that some of you are still finishing your lunch and that is okay, so are most of our panelists. We are going to begin in a few moments. But if you are in the room, please don't forget to turn your cell phones to silent or vibrate. We will begin in a few moments. Thank you.

(Pause)

>> JOHN WODATCH: Good afternoon, everyone. We are going to proceed. Thank you for returning so promptly.

I neglected to mention earlier this morning that this event is also being streamed live on the Internet simultaneously with the event itself so your remarks are going well beyond the hearing room today. And we will, for a short time after this, keep the hearing on our website, ada.gov.

We will continue again this afternoon. We ask everyone to try to keep their comments within the five-minute period of time. We have a large number of people who are going to testify.

The device here will tell you -- the yellow light will go on when you have a minute left to go. There will also be a beep and the red light will come on at five minutes. We ask, if that happens, that you conclude your remarks at that point.

Why don't we begin? We are going to start with Jessie Sandoval for the Marin Center for Independent Living. Mrs. Sandoval.

>> JESSIE SANDOVAL: Thank you for the opportunity to speak today. My name is Jessie Sandoval and I'm an attorney as well as a system change advocate and community organizer with the Marin Center for Independent Living.

I'd like to speak today regarding some of the rules and regulations as they relate to the accessibility of medical equipment and of furniture. I will relay some of my personal experiences as well.

I'm a wheelchair user as well as somebody who is visually impaired. I can tell you throughout my years that the accessibility of medical equipment in physicians' offices is definitely something to be desired. It's so limited. It has sort of become a fact of life for many of us with disabilities.

I frequently visit optometrists as well as ophthalmologists. I can say that those offices are very difficult for someone who is a wheelchair user. Often, the exam chairs are too high, and it makes it nearly impossible for us to transfer safely to and from the examination chair, which then requires us to bring somebody with us to the appointment.

So one way to relieve this would be to have exam chairs that are adjustable so that we can safely transfer as well as provide a bit of training, which I think other people have mentioned, so the staff can assist us in transferring as well. And for folks that are not able to transfer to and from an exam chair, it would be ideal to have a chair that is easily movable so that individuals can receive services in their wheelchairs.

Also, often, many of the more advanced exams that you receive in an eye doctors' offices are not accessible. I have had, often, to have someone help me to do some photography that is required, and I have to sit in chairs that are extremely tall. So again, to have chairs that are adjustable or movable as well.

Additional accessibility issues are presented at dental offices. Often, certain types of X-rays are not accessible for people with disabilities. This includes panoramic X-rays, the type of X-rays that go all around your head.

I actually haven't had one since I was a teenager and had braces. I didn't even realize that they still gave those X-rays to adults, because, actually, it's never been offered to me as an adult. So that tells you how — a problem that is. And again, a way to remedy that would be to make it so that it's accessible and add adjustability so the folks can receive the X-rays in their wheelchairs or have the opportunity to have assistance if needed for them to receive the X-ray.

So the fact that it's never been offered to me as an adult shows one of the common consequences of not having accessible equipment in doctors' offices. The doctors and employees think it's not a big deal and they just don't provide, you know, the same care that other individuals receive who don't have disabilities.

Another accessibility issue related to equipment is general accessibility in physicians' offices as well. This includes accessible exam tables. I can't even begin to tell you the last time I was actually able to transfer onto a table because it was low enough.

The result is that people with disabilities often receive exams in their chairs and as such, they don't receive the same examinations that they would otherwise receive or the doctors might not evaluate them in the same way.

They'll just look at you and prescribe something as opposed to really, you know, doing that physical overview that they would give other patients.

And again, this could be easily remedied by providing adjustable height exam tables so the individuals can transfer as well as, as I said before, having staff that are available to assist with transferring.

Often medical staff are not very comfortable with helping out patients with disabilities. They expect you to bring someone to the appointment with you, which for some people works but for others, you can't always bring somebody with you. It's important to have staff that are aware and can help you facilitate your medical appointments as they would be for everyone else.

Then lastly, another need is for accessible scales. I can't tell you the last time I've seen a set of accessible scales, which is something that doesn't happen for us with disabilities.

Knowing a person's weight is really critical to administering medication as well as reducing secondary disabilities that may result from people who are wheelchair-users or have other disabilities. This is something that's sort of gone unnoticed. And having an accessible scale, is something that's cost effective and can easily be put in doctors' offices and can be used by others as well.

I believe that wraps up my five minutes. So thank you for your time and taking this opportunity to hear comments from the community today.

>> JOHN WODATCH: Thank you for being here and sharing your views with us.

>> JESSIE SANDOVAL: Thank you.

>> JOHN WODATCH: Next, we'll hear from Jack Castle. Mr. Castle?

>> JACK CASTLE: Thank you. I'm here to talk particularly about closed captioning for movies. I am not a hearing-loss person. My wife says I suffer from selective hearing but my wife is the one who has lost her hearing.

In 2000, my wife came down with meningitis. After 10 days in a coma, she awoke and she had lost all of her hearing in her left ear and 80 percent of her hearing in her right ear.

Our lives changed dramatically. We had never been aware of any of the problems that affected the hearing loss community in our area or, let alone, in the country. My wife got very active in the Hearing Loss Association. It's formerly called Self Help for Hard of Hearing.

Since that time, we have made a lot of adjustments. One of the things that we particularly enjoyed doing, prior to her hearing loss, was going to the movies. We've tried to do that since then. We have found that the movie theaters do not give you a system that works.

They have tried the rear captioning. You can't watch a movie and look at the rear captioning in your lap. They have given us hearing devices that just make the static louder. The only thing that has worked for us is closed captioning.

It's interesting to note that the movies that we do enjoy are foreign movies and they're all captioned. And they are successful, very successful. If you have gone to the movie houses, you have seen that the foreign movies are usually fairly full, if not totally full. And they, like I said earlier, are all closed captioned.

One of the points that I'd like to make is that somewhere between 14 and 17 percent of the population has some form of hearing loss. When you hear the movie theaters talk about not being able to afford to make the difference and put in the closed captioning, I think they're being shortsighted. When you take a look at the 14 percent, all those people go with someone else. I don't go without my wife; therefore, you can double that. Twenty-eight percent of the population is affected by hearing loss.

Families are affected by it, the people you work with, so it seems good business and good practices to me that the hearing -- not the hearing, excuse me -- the movie theater operators are excluding a good percent of the population from their marketing.

When you take a look at some other things too -- you see the academy awards and other awards shows, there is a large portion of the population that does enjoy foreign films, so the captioning does work. All of the DVDs that are put out by movie producers now have captioning. If you go to Best Buy, Netflix, any of those -- not Best Buy. Excuse me. What's the one that's --

>> MAZEN BASRAWI: Blockbuster?

>> JACK CASTLE: Thank you. Blockbuster or Netflix. They all have captioning available in different languages.

It would seem to me that the movies are in one part of the industry very aware of what is available, and make it available to the broad spectrum, where the operators do not. And I think that closed captioning solves that problem, not only for the hard-of-hearing, but for their families. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate you taking the time to be with us today. Next, we will hear from Kathy DeRenzi.

>> KATHY DERENZI: Thank you. I have a chronic digestive disease. I have ulcerative colitis. There's no known cause and no cure. I need access to restrooms frequently and sometimes urgently. When I'm away from home, I worry about finding and having access to restrooms. Many people with this disability — with this disabling condition prefer to stay home, as I often do.

Many businesses will not let you use their restrooms. They say, our restroom is not for public use, or they tell me to go next door offering another business's restroom facilities.

I'm here today to encourage that we revise regulations in California and nationwide to allow access to restrooms at public places of business that are now denied to people with disabilities. This restroom access has become law in some other states, and needs to become law in all states immediately. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate you coming and spending the time with us. Our next Commenter is Richard Ray. Nice to see you.

>> RICHARD RAY: Thank you. Good to see you as well. Good afternoon, and thank you for having me. My name is Richard Ray and I'm an Americans with Disabilities Act compliance officer with the City of L.A. I'm also on the chair of the Accessibility Committee with the National Emergency Number Association, and a member of the National Association of the Deaf Civil Rights Committee.

And I'm here to address two issues: accessibility of 911, and emergency alerts. Regarding accessibility to 911. With today's expanding technologies, such as text messaging, video phones, video cam and instant messaging via computer and wireless devices, more deaf, deaf/blind, hard of hearing people and people with speech disabilities are shifting to these technologies while fewer and fewer people are using TTYs. We have zero direct access to 911, using wireless hand-held devices.

Currently, PSAPs do not address the needs of people with hearing loss or speech disabilities who rely on emerging technologies such as text and video as their primary mode of communication. The current PSAP system is not able to receive direct text and video calls due to the system not being compatible and not being updated to accommodate these emerging technologies.

Individuals with hearing and speech disabilities will have to use a third party such as an Internet relay-based service to reach 911 using text or video. This is not considered direct access. Using a third party for communication could lead to a time delay.

For example, during the recent National Emergency Number Association annual conference, several 911 test calls via Internet-based relay services were placed. With IP relay service, it took over four minutes to connect to the PSAP and it was through an emergency line.

Also with video relay service, it took over five minutes to connect to the 911 center and it went through an administrative line. Both of these calls were supposed to have gone through a 911 line, which would have shown the caller information such as the physical address and the call-back phone number.

Last August 19th, another series of test calls were made to 911 utilizing various VRS providers. While a couple of relay service providers appear to have connected the calls to the appropriate PSAP 911 line, the others were either routed to another city, such as the City of Azusa, or the local PSAP administrative or emergency lines. A couple of calls were dropped and no callbacks were made.

Based on these tests, I've died more than seven times. A few minutes delay has shown that it could have led to death. Again, every second counts. Please support this next generation 911 upgrade to the 911 system so consumers can call 911 directly and receive assistance in a timely manner.

So the NENA slogan is: Call 911 anytime, anywhere, and with any device. Turning to emergency alerts.

Access to emergency warnings and information is important for the general population as well as for people with disabilities. People in the United States rely on siren, television, radio, and telephone for information whenever a crisis or emergency occurs. However, this type of technology is inaccessible and not reliable or workable for deaf, deaf/blind and hard of hearing people.

On December 23, 1985, I was at the lower level when a twin-engine plane crashed through the Concord Sun Valley shopping mall's roof, igniting a fireball that burned everyone in its path. Seven people died and 77 were injured.

I had no access to the announcements that were made about what was going on. In fact, I didn't learn about the situation until I arrived home. It's critical that people with disabilities receive messages at the same time as hearing people in order to meet their needs. Technical development may be

necessary to create a system that provides equal communication access to receive notification.

It is crucial that options with redundancy for emergency alerting systems that are accessible to individuals with disabilities such as 911 mass notification systems, using electronic reader board, e-mail, SMS, video clips and various emerging technology in addition to the analog phone system. Furthermore, mass mandatory testing on a regular basis should be conducted to ensure that all types of alert modes are working. They should be corrected immediately if an issue arises.

Again, every second counts. Thank you.

>> JOHN WODATCH: Thank you very much. Let me introduce -- we have different panel members joining Mazen and myself. Returning, again, is Kathy Devine, an attorney in the Disability Rights section. And joining us now is Felicia Sadler, who is another senior attorney in the Disability Rights section who will be working on these rules.

Our next commenter will come through the phone system and will be Jo Firpo.

>> JO FIRPO: Hi everybody. I have two points. I'll be pretty brief. I have severe electromagnetic frequency sensitivity. I want to speak on Internet accessibility. Basically, with this condition, Internet is not accessible by me pretty much at all at this point.

So, having the information available by paper or by phone -- you know, a lot of times I'll call up and they'll say, oh, it's on the Internet. And I'm, like, well, I can't really get on the Internet. So that is something to think about. Also, there is an MIT engineer who has developed a shielded computer, which may be an option for people with electro-sensitivity to have Internet access.

The second thing I wanted to comment on deals with the furniture accommodation and this is actually more regarding light fixtures. Ninety-eight percent of public spaces are lit with fluorescent lights, and for me that's just like being in an experience of having acid poured into my nervous system, my mucus membranes and the dura around my brain.

In general, I avoid public places. But I had to go to the doctor recently and I knew if I sat in the waiting room and the examination room for 45 minutes, I would be dry heaving. I ended up bringing a parasol, and using that. And it worked fairly well, I would have to say. But it would be nice to have considerations regarding alternatives to fluorescent lights, safe places that electro-sensitive people could be in public places.

That's all.

>> MAZEN BASRAWI: I have just one question. Is this on? Now it is. I have one brief question. Is there any kind of energy saver light fixture that you find is not problematic?

>> JO FIRPO: Well, it's interesting. The politically correct energy saver light bulbs are actually worse. The ones that work the best for someone with this sensitivity is, like, the traditional incandescent bulb, maybe with an up -- like low to the ground up lighting so it's not shining directly on the body, like, indirect, low, up lighting.

>> JOHN WODATCH: Thank you. Our next commenter is also going to be done on the phone system, and we are going to hear from Andrea Berrin. We are connecting right now. Ms. Berrin, you may proceed.

>> **ANDREA BERRIN:** Thank you. Good afternoon, everyone, this is Andrea Berrin. Thank you for this opportunity.

I would like to be there with you in person, meeting with the Department of Justice representatives, and all you good people who have come to speak with concerns to improve the lives of those with disabilities so that they can participate with equal enjoyment of all the goods and services, the privileges, the accommodations spoken of in Title III and what the ADA is about.

I am not there with you, because I am disabled. I am not in a wheelchair. I am not blind or limited vision. I'm not deaf or of limited hearing.

I have what is referred to as radio wave sickness, or electromagnetic injury, or electro-hypersensitivity. This precludes me from being in just about any of the places listed in the 12 categories, the public categories, named in the ADA that should be accessible.

I am precluded because I get sick. So being in any building or office or restaurant or any of the places named, going to the market, the bank, the Post Office, my goddaughter's elementary school classroom, I am sick.

There are many others who will testify today or at your other hearings or are submitting important scientific findings about the effects of electromagnetic radiation, the radio frequencies, wireless technology on the population that you are attempting to offer the services of.

I will just add that the wireless technology being proposed, my concern is that it will only exacerbate health challenges of the vulnerable disabled population as well as the rest of all of us.

So I will tell you a little of my own personal story, which will weave into this big picture that you are looking at. I am like the canary in the coal mine. There is a fast growing population of people who are becoming more and more disabled, and unable to function in this society because of electromagnetic radiation, the radio frequencies and wireless technology.

In fact, it is becoming an epidemic, although many of you don't know about it because of the clever mass marketing of this technology to every business and every family. I was a court reporter for 27 years full-time. I wrote every word spoken in criminal trials, including murder trials, spending 13 and a half years at juvenile court, and taking many civil cases.

The precision of my transcripts may have made the difference between life and death, and everything in between for the people involved. I handled original documents, medical files, wills, birth certificates, etcetera.

I'm also by the way a Phi Beta Kappa graduate from UC Berkeley. Why am I telling you this? So that you understand that I was a highly functional person, carrying important responsibilities and a contributing citizen to this country.

Now, I am so affected by this electromagnetic radiation, I'm using that as a general category, that I have not been able to work for seven years. There is not a building, an office, a classroom, a store that I can be in without getting sick. I can't look at a computer without being sick. I'm telling you my story, but there are many more and continually many more that are being affected like I am.

I am affected by fluorescent lights. Especially the compact fluorescent lights, what they call the energy saving lights. I have spent tens and tens of thousands of dollars seeing all kinds of doctors, Western medicine, Stanford, doctors in San Francisco, clinics back East.

About three years ago, a friend brought me a 143-page document translated from Swedish called, Black on White, Voices and Witnesses about Electro-Hypersensitivity, the Swedish Experience.

I urge the members of the Department of Justice to look into this document. It contains over 400 testimonies of people, normal people, working under fluorescent lights, computers, cell phones, cell towers, Wi-Fi, etcetera. I think that was my one minute.

>> JOHN WODATCH: No, I'm afraid it was your five minute. But if you can conclude, that would be --

>> ANDREA BERRIN: I'm sorry. I didn't hear the one minute.

>> JOHN WODATCH: That's quite all right.

>> ANDREA BERRIN: I'm sorry. I will conclude. I will just say that -- okay. Let me conclude. I'm sorry. It goes pretty fast. People are buying into these technologies like the emperor's new clothes. The difference is when they found out the truth about the emperor, the people just felt foolish.

In our day and age, the truth about these electromagnetic frequencies is that more and more people are getting sick, even though it may start with just insomnia, aches and pains, anxiety, and lead to autoimmune diseases, cancer, heart disease, mental cognition problems, etcetera.

I urge you, please to look into this very, very carefully and I believe that what they are calling the epidemic of the 21st century, Alzheimer's, also has a strong connection to our exposure to these invisible frequencies. Thank you so much for your efforts, your good work and for listening to me. I appreciate it very much.

>> JOHN WODATCH: Thank you very much. We appreciate you taking the time and sharing your personal story with us.

>> ANDREA BERRIN: Yes, thank you. The best to you all.

>> JOHN WODATCH: Next, we will hear from J.J. Rico. Mr. Rico?

>> J.J. RICO: Thank you. Good afternoon, my name is J.J. Rico. I'm the managing attorney for the Arizona Center for Disability Law. Our office presently represents two individuals in a lawsuit against Harkins movie theater. My office is part of the national protection and advocacy system. I'm here today to talk about captioning and description.

Five years ago, our office decided to represent two individuals with unique stories but common experiences. Rachel Lindstrom called our office and described her son, at that time, a 15-year-old boy who wanted to go to the movies. It wasn't that her son Ricky had never gone to the movies and in fact he had gone to the movies. He had gone to movies with his family and with his friends.

But what Ricky's experience was, was half of what most of us who can hear. Ricky could not hear the dialogue but Ricky still spent those high dollar ticket prices to go to be with his friends. That's a common story that we heard.

Our second client, Larry Wanger, recently moved from Michigan. And Larry is a person who is visually impaired and blind. Coming from Michigan, he had an experience of being an advocate and continues to be an advocate in

his community. Through his advocacy in Michigan, he contacted the local movie theater and asked for and received a scripted narration.

However, Larry Wanger's experience in Arizona was not the same. To give you the statistics on what Harkins movie theater currently provides, when we started lawsuit five years ago, or we started our representation of these two individuals, Harkins movie theater had approximately 262 screens. One of those screens contained open caption, one. For descriptive narration out of the 262 screens, there was zero screens with descriptive narration.

Now, five years later, after litigation has been filed, after advocacy has continued, there are three movie screens, with descriptive — excuse me -- three movie screens with captioning out of over 300 screens that Harkins now has. In the descriptive narration world, there are now 15 screens, again, out of 300.

In the minds of my clients and minds of their communities, that is not enough, especially when we look at the statistics and the financial incomes of these movie theaters. The National Association of Theater Owners has provided statistics that showed in the year 2009 alone, the box office hit record earnings of \$10.6 billion in admissions, and 1.4 billion in concessions.

I think we always thought popcorn was a little bit pricey but maybe not quite that pricey. That year also marked the third straight 4 million-plus summer season. Admissions continue to grow five percent as movie theaters' owners and operators closed out the fourth consecutive decade of growth in ticket sales.

Per capita, ticket purchases grew by 4.6 percent. If we look at one of the big three, the "big three" being Regal, Cinemark and AMC, in 2009, if you go to their website, Regal generated \$2.8 billion of revenue. And its net income was \$279 million.

The profits of AMC and Cinemark can be found on their websites and readily accessible for anyone to view, and to see that, they too, have made a lot of money.

Furthermore, in addition to the profits that they're making, the big three have secured alone for \$660 million. And you might ask: What's the \$660 million for? It's to roll out 14,000 — approximately, 14,000 digital screens.

So I had a question to myself, at least, that, well, after making all this money, what has happened nationwide? I know about Arizona and I can talk about Harkins movie theaters. But what's happening nationally? What type of money are these other big three and other theaters investing in captioning description?

And a little research from NATO's website, the National Association of Theater Owners and also the MoPix website has led me to the conclusion that little to nothing has been done.

In fact, of the top ten which possessed -- top ten movie theaters which possessed 21,000 screens, only 236 of those screens out of 21,000 possess either captioning or video description. So my question is: Why are the movie theaters continuing to fight?

As Judge Kuzinsky said in our 9th Circuit Oral Argument, "Why are you fighting this?" I thought that the fight might be over with the notice of public rulemaking but I listened to NATO and AMC's public comments. And all of you, if you haven't listened, go back and look at the Chicago transcript and listen to what they have asked DOJ to do.

As you probably recall, they asked you to wait, to wait two more years. And why do they want to wait? Because they say digital technology is not here. They say digital screens aren't here. But we've already shared with you that digital screens are here.

They've even gotten more money to roll out more screens. But they still want us to wait. They also contend that there is no technology but there is digital technology. In fact, there's three companies that currently have something you can purchase. And maybe it's not at the Radio Shack, as AMC's attorney said, but it is available for purchase.

So my response to NATO and AMC and any other theaters that may say, suggest or ask, wait two more years, I say no more waiting. My clients and their communities have waited long enough. The time is now for all Ricky Lindstroms and Larry Wangers in this country to have an opportunity as I have and of those that have vision and those who can hear to see a movie. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate your testimony today. Our next commenter will be on the telephone, Florita Toveg.

>> FLORITA TOVEG: Thank you. My name is Florita Toveg. I'm from Breast Health Access for Women with Disabilities. And thank you for your time today. Founded by and for women with disabilities in 1995, and, in '97, opened the first accessible breast screening clinic in the country, BHAWD, overarching goal is promote optimal health for women with disabilities.

We do this by reducing disparity to utilization of health promotion and screening services and diagnostic practices particularly in women's health services.

There has been a rapid upswing in efforts to improve healthcare service access for underserved populations, including women with disabilities. However, striking differences in healthcare accessibility, quality and utilization persist.

One under-addressed issue in the fight against breast cancer access is the inability of the imaging equipment to be accessible to women with disabilities. These include women who have limitations with balance, posture, muscle weakness, spasticity, flexibility, chronic pain and/or inability to walk or stand.

Mammography is used to help screen for changes in the breast tissue over time. It is an X-ray image of the breast that can detect 80 to 90 percent of breast cancers in women over 50. Mammography exams are an effective tool for diagnosis and possible prevention.

Breast imaging technologies have progressed the past several years to include, for one, digital mammography system that has offered advances in imaging exposure, processing and transmission. While screening mammography is recognized as an effective method for early detection of breast cancer, and there has been promising new technologies that has improved clinical applications, the equipment itself has not become more accessible to women with disabilities.

Breast cancer is the second cause of cancer death in women. And women with disabilities may be at higher risk for delayed diagnosis of breast cancer primarily for reasons of environmental, attitudinal and informational barriers.

For instance, in California, women with disabilities are less likely to receive routine screening mammography than women without disabilities. Instead, more frequently obtaining mammograms for a suspected problem or for breast cancer.

Women with disabilities are developing breast cancer at the same rate as all women; however, women with disabilities are one third more likely to die from breast cancer than women without disabilities. Later stage diagnosis typically result in greater functional impairment, poor quality of life and shorter survival rates.

Hopefully you have heard and received information to help develop standards for mammography units which would also assist in better visualization of breast tissue, greater flexibility for positioning, greater comfort for patient clients with disabilities and would also be helpful to the radiologic technologist, the RTs, that are performing the mammography exams.

A few of the features that our RT Committee has recommended is allowing height adjustment for the unit imaging receptor, or buckey, to go as low as possible. A maximum of 24 inches from the floor to the top-side of the receptor, or buckey, is appropriate.

Allowing adequate knee space for a wheelchair user as in distance to stand from the front edge of the imaging receptor buckey is also important to consider. Having an adequate and safe positioning chair when needed and addressing the issues and problems with some units' protruding platforms that can also interfere with positioning a person seated in a wheelchair.

The road from accessible regulatory imaging equipment innovation to accepted clinical practice is long, detailed and costly. Adoption of new accessible technologies may depend on whether healthcare providers and their clients find them usable and acceptable.

In the meantime, it is important to review existing successful healthcare provider education initiatives. Given the unique needs of the growing diverse disability population, education and training of healthcare providers is vital to increase healthcare access and address cancer care inequities that face women with disabilities.

For many women with disabilities, healthcare providers, especially radiologic technologists, RTs, represent a key point of contact in the breast healthcare continuum. A client who has one negative experience receiving a mammography, mammogram, may be deterred from returning for subsequent mammograms for years to come. On the other hand, an RT who is competent in communication and adaptive positioning for women with disabilities can encourage her to seek routine mammograms and if needed to take control of her own breast health.

Bearing in mind that essential functions of RTs especially those who conduct mammography, we have developed and carried out a series of trainings that promote routine mammograms and allow technologists to improve their imaging techniques and develop disability culturally competent skills.

Since 2004, we have conducted 10 trainings approved by the American Society of Radiologic Technologists for C E credits. All of the trainings have been attended at full capacity with waiting lists formed.

The training evaluations have consistently revealed increased confidence in providing mammograms to women with disabilities. The technologists also express the belief that this training should be mandatory for all first year radiology students, and at least one member of every breast imaging facility's mammography team. Several participants stated, quote, these are

topics that have never been touched on in any seminars in my 30-year career, important for all RTs.

In conclusion, in addition to reviewing standards for radiology mammography equipment, we are asking DOJ to review existing provider initiatives and developing systems that includes cultural competency training and positioning techniques in order to increase access and accommodate women with disabilities. Thank you.

>> JOHN WODATCH: Thank you very much. Next, we will hear from Carrie Riordan. Ms. Riordan?

>> CARRIE RIORDAN: Good afternoon. I'm a member of the board of directors of the National Alliance for Accessible Golf, a nonprofit collaborative alliance of golf organizations, rehabilitation organizations, recreation and park associations and independent accessibility advocates. Our mission is to increase participation of golf -- of people with disabilities in the game of golf.

We believe that through the game of golf, individuals with disabilities can become actively engaged in the social fabric of their communities and derive health benefits that improve quality of life. Our three key initiatives are; one, gain golf accessible and inclusive networks. An alliance research-based inclusive program that uses golf as an effective vehicle for bringing people with disabilities into or back into the mainstream of the community.

Two, the alliance administers a grant-making process through the United States Golf Association that since 1997 has granted over \$5 million to golf programs for individuals with disabilities.

And three, the alliance develops and provides technical and training resources as well as accessible golf guidelines and tool kits for golfers, golf professionals, rehabilitation specialists and golf facility operators. We applaud the DOJ and their continued efforts to enhance opportunities for individuals with disabilities and to develop rules designed to bring the ADA fully into the 21st century, especially as it relates to sports, fitness, recreation and wellness.

Our comments today relate specifically to questions 14 and 15 that address access for people with mobility disabilities and accessible golf cars. The alliance supports the position that the most effective means of addressing the needs of golfers with mobility disabilities has to first come with continued and enhanced education and training of the concept and application of a golf inclusive environment for programs, practice and play.

While accessible single-rider cars are just one solution to the needs of some golfers with mobility disabilities, we believe that mandating single riders reflects a very limited response to a multifaceted issue regarding accessible golf.

Many accessible accommodation options already exist and are in use and available at many golf courses, such as the use of traditional golf cars with access to tee and greens, using flagged golf car policies, hand controls on traditional golf cars, and sharing or pooling single rider cars, to name a few.

Golfers, owners, operators and professionals need continued education regarding inclusion and how to facilitate inclusion plans and policies that can reasonably accommodate all. These must be relative to the uniqueness of the disabilities as well as the uniqueness of the golf facilities and their resources. All golf facilities must have inclusive operations, customer service practices and programs and play policies that include access and availability of equipment and address the needs of people with a variety of disabilities.

The question is, whether it is necessary for all golf facilities to have single-rider cars or other accessible golf cars. Again, there are real examples of golf courses and municipalities with golf facilities that already have one, two or three or more accessible golf cars in use as well as other options to accommodate golfers with disabilities because over time, they have educated the golfers, operators, professionals in the community and offered programs reflecting a positive inclusive environment.

These are some of the best practices and inclusive operations models to share and use when developing rules and guidelines. Most golf facilities should have access to and availability of single-rider golf cars and other means of accommodation regardless of where the facility is in the process of developing an inclusive golf operations environment.

Regarding single-rider cars, many courses already buy, lease, share, or pool single riders and successfully and regularly make them available to customers. With that said, however, currently there are no safety standards governing single rider or accessible golf cars.

Safety is an issue that must be addressed for accessible golf cars with the same level of ANSI standards and regulations that exist for traditional golf cars. While accessible cars are in use without safety standards, we recommend that safety standards and safety testing for all single riders be in place before any ADA ruling that mandates their further use.

We also suggest that this is not just about developing a rule or policy and a mandate that all golf facilities have a specified number of single rider golf

cars, and then people with disabilities will come. There is a larger more pervasive issue that needs to be addressed before any policy or rule will really work and be embraced in golf or any sport or recreational setting. That is the issue of education and awareness.

We need to educate people and make them aware about the many ways that allow people with disabilities, including those with mobility disabilities, to play and enjoy their best golf. Education, training and awareness of all options for accessibility programs must continue to be recognized -- to be a recognized priority at all levels of golf operations for ADA and golf for individuals with disabilities to truly become a reality in the 21st century. Thank you very much.

>> JOHN WODATCH: Thank you. We appreciate your testimony today. Our next commenter will be on the phone and will be Shivani Arjuna.

>> SHIVANI ARJUNA: Yes, hello. Shall I just go ahead? Hello?

>> JOHN WODATCH: Yes, go ahead and proceed.

>> SHIVANI ARJUNA: Okay. I am sensitive to radio and microwave frequencies so I'm going to be talking from that point of view. I have what is called radio wave sickness. We became aware of this in 2002.

I had been having increasing trouble with cardiac irregularity and was diagnosed with pre-atrial cardiac syndrome. I asked the doctors what that meant, and they said one chamber of my heart was beating out of sync with the others. And I said, why? They said the electrical signal of that chamber is off. I said why? They said, they didn't know.

Things got worse. I had pain and numbness on my left side, pain in the left side of my head, extreme insomnia, and finally had a couple of cardiac incidents that were so scary I went to the hospital in an ambulance. I had \$18,000 worth of medical tests done, which could find no reason whatsoever for the symptoms that I was experiencing.

However, we were referred to people who were doing a study about radio frequency sickness because some of my symptoms sounded like that. And then we had our home tested for, quote, what's called "dirty electricity," which are radio wave frequencies being broadcast right from the wiring in your house.

And we had that done by an expert who was used in many court cases and He said our home had a very high level of this. And so we undertook remediation for that ourselves and, lo and behold, my symptoms went away.

So I became very interested in this topic. I've actually put up a website about it and that website is lifeenergies, l-i-f-e-e-n-e-r-g-i-e-s, dot com. There's a lot of politics involved, because the electrical companies are responsible for the purity of their product, but no one enforces them to be. So people like me get very sick. And we have to undertake the expense ourselves of making our own homes safe.

So now, I'm safe as long as I'm in this environment that we have created for me. But when I go out, whenever I'm somewhere where I'm exposed to Wi-Fi and things like that, I immediately get symptoms again. So for example, our local library put in Wi-Fi, maybe two years ago or so, and I used to love to go to the library. The library is the center, its not just a library, it's the center of all community activities in the small town we live near. I can't go there anymore. If I'm there ten minutes, I have terrible, terrible pain in my head.

And it goes away about 20 minutes after I leave the library. And that is my experience every time, ten minutes and terrible pain in the head. So I just cannot go to those activities.

And so you can tell, I'm limited to where I can go a great deal. I'm lucky that I can live in the country, in a quiet place. But more and more things are encroaching here. And one thing is that for instance, our utility company wants to put a radio frequency broadcasting meter right on our house and threatened to turn our power off if I wouldn't take it.

I would like to read you parts of a letter that my doctor wrote to the electric company about that:

"My patient, Shivani Arjuna, and her husband have asked me to write you regarding how she is affected by exposure to communication frequencies and quote "dirty electricity" frequencies. They are deeply concerned that placement of one of We Energies' new radio broadcasting meters on their house would be harmful to their health, especially to Shivani's and I share their concern. The immense proliferation of wireless technologies in the past few years has given rise to health problems that cannot be successfully treated medically as medicine cannot remove the underlying cause, the exposure."

Does that mean I have a minute? Oh, my.

>> JOHN WODATCH: Yes, that's correct.

>> SHIVANI ARJUNA: Okay then I'm not going to read his whole letter. But he goes on to mention that there are actually a list of radio wave sickness --

illnesses, and that you will find that on the website too, if anybody wants to read it.

So then he talked about some biological possible mechanisms and finally, he said, "Although it's not possible in today's world to completely avoid these exposures", you know "we should not be forced to be exposed in our own homes."

So besides the things like the radio broadcasting meters, another thing that should be not allowed to happen is broad band over the electrical wiring system because then it would go right through the entire house of all the radio -- people with radio wave sickness and we wouldn't be able to bear being in our own house.

So I feel very bombarded, you know, I have to stay at home. I hope that you will expand the ADA to include specifically radio frequency sickness, and also add a supplemental docket on radio frequency sickness.

>> JOHN WODATCH: Thank you very much. We appreciate your time with us today.

>> SHIVANI ARJUNA: Thank you for listening.

>> JOHN WODATCH: Next we're going to have a double testimony, Dr. Sandy Ross and Annie Cruz. The floor is yours.

>> SANDY ROSS: Thank you, John, and the rest of the panel. ADA has been incorporating hidden disability such as chemical and electromagnetic sensitivities but not fast enough to keep up with the influx of chemical use and deployment of electronic equipment, such as cell phones, Wi-Fi and smart meters.

Researchers are reporting many, many ways the human system is affected by electromagnetic fields, because we are electrical beings. Recently at the Commonwealth Club, Professor Mark Blank from Columbia University reported DNA is a fractile antenna, with different coils reacting to different EMF frequencies. No wonder people are getting permanently damaged and it can be passed on to the next generation.

A basic example of energenic interaction with electromagnetic fields is photosynthesis, the conversion of light to chemically stored potential energy for plant life, and thus for all of us.

Our brains, our hearts, our eyes, our muscles, our skeleton system and other organs all generate electromagnetic fields and communicate through them. The effective intensity of one, 10 millionth of volt is implicated in the

interaction between cells. This is the same level found in the control of human biological rhythms, the level of EEGs in brain tissue, and navigation in fish, turtles, animals and birds.

Did you know that we have the same electromagnetic crystals in our brains which allow effects at low level electromagnetic field exposures?

Electric fields are bio activators of multicellular process. For example, electric fields from the sino atrial node control the entire vascular tree. In the human brain, all of the domains perform their various functions autonomously, and coupled together they generate a flow of patterns and cycles that function in coherent phase together. This is very important.

So you can understand that EMF disrupts brain function. Interconnection of neurons and cells with neurotransmitters bridging the gaps, is just one of the many electrical activities within the brain.

Electromagnetic fields affect not only the brain, but the entire organism through exchange of energies. Our bodies are electrochemical instruments of exquisite sensitivity. Orderly function and control are regulated by oscillatory electrical processes, each of a specific intensity and frequency.

External electromagnetic fields interfere with these and are deeply implicated in obesity, diabetes, cancer, infertility, neurological disorders and many, many 21st century medical problems.

Smart meters give off radiation ten times or more stronger than cell phones. Their presence on the line causes dirty electricity and interferes with electronic devices like computers and baby monitors. Dirty electricity, also called “electric noise,” is biologically active and disrupts how our bodies function.

Your board recognizes that chemical and electromagnetic sensitivities are disabilities, and several years ago was planning to closely examine the needs of this population and undertake activities that address accessibility issues.

You were supposed to develop an action plan to be used to reduce the level of chemicals and electromagnetic fields in the built environment. What has been done?

People with these disabilities practice avoidance. But with smart meters, there is no choice. We need you to change this. Installation of these devices is essentially prescribing treatment with electromagnetic fields and radio frequency radiation without a medical license.

It is inhumane to expose people to these frequencies, and without their informed consent. It violates the Nuremberg Code. Please take action immediately to provide for access to public places, including schools, for people with electromagnetic sensitivities.

>> JOHN WODATCH: Thank you.

>> SANDY ROSS: Shall I?

>> JOHN WODATCH: Yes, go ahead.

>> SANDY ROSS: Good afternoon. I'm speaking for Health And Habitat, a nonprofit organization that helps people with chemical and electromagnetic sensitivities. A few years ago, there was a project of the national institute of building sciences with funding supported from the Architectural and Transportation Barriers Compliance Board to help people with electro sensitivity.

The committee recommended, among other things, that NIBS provide or seek funding to develop a sample clean air room, complete with clean air symbol and gave specifications for design and construction. Conditions for this clean room included freedom from chemical, cell phones, computers, fluorescent lighting and other electrical equipment, Wi-Fi and smart meters would be included. Some conditions -- similar conditions should prevail on the path of travel and restrooms.

There are many un-addressed environmental barriers, some of which relate to specifics of this meeting. Medical equipment often has too strong an EMF field for people with electro sensitivity. This is a real problem when these people are hospitalized and must be mitigated.

Assistive listening devices must be offered hard wired, not just wireless, please. Electrical systems alterations to the house or building do affect the usability of the building by people who are electro sensitive. And in your papers, it was indicating that this wasn't so.

You are dealing with a full variety of living places in this session. Accessing these places is increasingly difficult for people with electro sensitivity. They're being driven from their homes, shelters and neighborhoods by radiation from cell phone, Wi-Fi, smart meters and similar equipment.

You have the obligation to protect people with this disability. One major way is to require their structures and buildings surrounding them have analog utility meters. You must also think how to protect from Wi-Fi radiating from residence and public places, cell phones, signals from smart meters, as

people with this disability walk down the street, visit medical care facilities and other places.

Another problem for people with electro sensitivity is access to physical therapy and diagnostic facilities because of the number of electrical machines they have in here. These places must be prepared to provide their services in a way that does not harm these clients.

Under telephone booth section, please retain some landlines and old-fashioned telephone booths for people who can't use cell phones. Flashing lights are an access issue for growing number of people. These need to be mitigated in all instances, especially medical facilities where people are already compromised.

What we see happening with some of your proposals is that you are giving special consideration to the more traditional part of the disability community by providing services that will harm another part. This absolutely needs to stop.

In sections on lawn seating and golf courses, you need to require signage of what pesticides and herbicides have been used and when. These outdoor places are not accessible to people with chemical sensitivities unless they are organically maintained and pesticide free and we should have some of those.

Section 202.3 says swimming pools that are only filtered or chlorinated are legally accessible. Sorry, this isn't true either. They are not accessible to people with chemical sensitivities. The ones that use UV light for purification are tolerable and hopefully, that can be required.

As keepers of the Americans with Disabilities Act, you have the right and obligation to protect all people with all disabilities, especially those less visible and well-known as they are most subject to abuse.

We expect you to fulfill your obligations by directing staff to make the right rules for the right accommodations. Those with chemical sensitivity have learned to shelter in place as much as possible, but those with electro sensitivity cannot find shelter because of the increasing electro smog. Some of it is being directed by requirements for electronic access for people with other types of disabilities.

This has to stop and you can do it. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate your comments. Next commenter will be from the phone, and will be Mary LaMielle. Mary, please proceed.

>> MARY LAMIELLE: Thank you and good afternoon. My name is Mary LaMielle. I'm executive director of the National Center for Environmental Health Strategies. Up to six percent of Americans are disabled by chemical sensitivities. An estimated three percent of Californians report electrical sensitivities.

Many people with environmental disabilities have multiple disabilities, including mobility impairments. People with chemical and electrical sensitivities are underserved, underrepresented populations who suffer greatly due to the failure of the Federal Government to address these disabilities in a collaborative and comprehensive fashion.

People sick or disabled with chemical sensitivities frequently have limited or no access to public and commercial buildings, to employment or educational opportunities, to knowledgeable and appropriate healthcare and medical services, to consumer products.

People with chemical sensitivities are frequently not treated with respect. They are not understood. Their civil rights are violated. They frequently face discrimination, whether at work, at school, in the community, in their families.

On July 28, 2010, the Department of Justice issued final rules, which included a discussion of multiple chemical sensitivities in the preamble. The Justice Department, again, declined to provide specific protections and noted that determinations must be made on a case-by-case basis. The failure of the Justice Department to recognize people with chemical sensitivities as disabled under the ADA continues its practice of discriminating against a significant population who are denied public access due to their inability to tolerate everyday exposures, typical to indoor environments.

This poses a great challenge to individuals with these disabilities. We urge the adoption of language in the ADA regulations that explicitly acknowledges access issues and delineates accommodations for those with chemical sensitivities in order to ensure that public spaces are accessible to them. We urge the Justice Department to recognize electrical sensitivities as a disability.

Equipment and furniture. The docket requests information to assist in determining accessibility requirements for non-affixed equipment and furniture. The ANPRM notes that without accessible medical equipment, examination tables, dental chairs, radiological diagnostic equipment, scales and rehabilitation equipment, individuals with disabilities do not have equal opportunity to receive medical care.

Individuals with disabilities may be less likely to get routine preventive care than people without disabilities because of barriers to accessing that care. Many people with chemical sensitivities go years or decades without basic medical services including dental care and other essential services because they do not tolerate indoor exposures.

These are serious issues and those with these disabilities have every right to access to medical care as others with disabilities that are visible or better understood.

Most indoor environments are not accessible for people with chemical sensitivities. This is in part, due to equipment and furniture that emits volatile chemicals, such as formaldehyde and other solvents. U.S. Access Board contracted with the National Institute Disability Sciences to examine indoor environmental quality access issues for people with chemical and electrical sensitivities.

In 2006, NIBS issued the Indoor Environmental Quality Report. The report references a California testing standard, CA-1350, a protocol for emissions testing of volatile and semi-volatile organic compounds. The Justice Department and other federal agencies should explore the use of CA-1350 to ensure the purchase of least problematic furniture.

Products and practices to enhance access for people with chemical and electrical sensitivities are available but not required by the Justice Department. We recommend the Justice Department examine these issues and join in a proposed interagency committee on chemical sensitivities.

Movie captioning and video description. We support making movie theaters accessible for individuals who are deaf or hard of hearing or who are blind or have low vision.

It's again important to note that movie theaters, as well as theaters and arenas with live performances, are not accessible for people with chemical sensitivities due to indoor contaminants. Furthermore, practices including use of smoke machines, strobe lights, smoking by performers and gunfire are also exposures that should require pre-notification to audiences together with use of alternative nontoxic or less toxic practices as available.

Thank you for your time. I'll also be submitting written comments.

>> JOHN WODATCH: Thank you, Ms. Lamielle. We appreciate your staying with us. We realize you weren't able to participate at our last hearing. We're happy you were able to address us today.

>> MARY LAMIELLE: Thank you. I appreciate that.

>> JOHN WODATCH: Next, we'll hear from Peggy Costor. Ms. Costor?

>> PEGGY COSTOR: Thank you very much. I appreciate the opportunity. Actually, listening to the lady about the electromagnetic fields, I'd like to really, really support what she said, because frankly, I have so many problems right now.

The last thing I need is for smart meters to come and really damage my life. I was against them before but now I really am against them. So I'm really advocating listening to them.

And I'd also like to say that I think we all know the biggest problem is going to be lobbyists. We all know that. Because whatever you try to do, the lobbyists will try to undo. And so The Supreme Court, frankly, is one of the biggest problems we have. Having said that, I'll go to what I really came to say today.

Issue number one, I have, is captioning. It's actually only a -- I'm sorry. It's actually a technical issue. I can't read, when they have foreign language -- you know, when they put the captions on. Half the time you can't read them because it's white on white. A technical solution to that is really simple. All you have to do is add full saturation and shadows to the writing and then you could read the white on white captioning.

So It's a technical issue but it's an important one because what good is captioning if you can't read it?

Issue number two, furniture. I agree with the furniture issues because I always have problems with furniture. I can't get anywhere I need to be. I've tried for years to find computer furniture that I can use and I have not yet found it.

But my real issue that I came for is speech to text because this is a very frustrating area. The operating system developers and all software developers need to work with each other in making sure computers truly work for people who need hands-free speech to computer operation.

And there's some very good reasons for that. Your life practically stops and you cannot defend yourself or get what you need or get information or do anything if you cannot use a computer these days.

Many government bureaucracies and corporations place forms on-line and have quit putting information out in written form and now either requires long waits or hang up on you if you call on the phone. If you wait, many menus repeat web information over and over and over prior to even giving the

option of speaking to someone on the telephone, and it only happens after an even longer wait.

Medicare, and other programs, require written and printed appeals, which cannot be done if speech to text does not work.

Corporation. customer service personnel say a great deal over the telephone that they either are not allowed to put it into writing or refuse to put into writing. And we all know why.

So that means that if we need to document what was said and done, we need to be able to document it ourselves on the computer and so on. There's all kinds of reasons, but life literally stops these days if you cannot use a computer. And you cannot defend yourself or do anything.

Yet, the dictation programs all cater to the able-bodied. Dragon is the best there is. And when it got to Vista, it worked perfectly. I mean, it was so good, it worked, the commands worked. The speech to text worked. But then they went to Windows 7 and they said, yes, it works on Windows 7, Dragon 10 does, and it does but very poorly.

I gotta tell ya, I quit using the Windows machine. I use Mac. I tried Dragon dictate for Mac. And it's where Dragon was several years ago but it's better than nothing.

I've got a lot more in here, to be honest, because speech to text is so very, very important. It needs hands-free capability, it needs -- headings, text, whatever, to increase in size. And it needs to be speech to text programs to include excellent voice recognition. And Apple is very bad and has long been very bad.

And the last thing I would like to say is, and I hope nobody is offended, but, honestly, federal employees get 10 percent discounts on many computers and other things. And the problem with that is that it could appear, whether or not it does, but it could appear that since bureaucrats are the people who set up regulations and other stuff that regulates what can and cannot be done by companies, it could appear that they could be -- it's kind of like lobbyists, you know.

>> JOHN WODATCH: Okay. No offense is taken.

>> PEGGY COSTOR: Thanks.

>> JOHN WODATCH: Thank you very much for your comments today.

>> PEGGY COSTOR: Thank you.

>> JOHN WODATCH: Our next Commenter is going to be via the phone and Sudi Scull.

>> SUDI SCULL: Hi. My name is Sudi Scull and despite my disability, I'm committed to being able to work. I had a bad accident in 1991 when I came close to dying or else being paralyzed. I was unable to continue my work as an architectural photographer due to the physical nature of my job. And since symptoms began after my accident became more debilitating, intense chronic migraine, asthma, neuropathy and nighttime seizures.

Still committed to working, I began graduate school in psychology. I am now a licensed marriage and family therapist and certified nutritionist. Through trial and error and seeing cutting-edge doctors, I've learned I have both chemical and electromagnetic sensitivity.

I receive Social Security, disability and have a small private practice. Finding an office with my disability was a needle in a haystack, so I work out of my home. I live a circumscribed life but have found emotional and physical stability within my tight parameters.

But in January of 2010, without my knowing it, our utility company PG&E installed two wireless smart meters in my house. I experienced dramatic physical and psychological symptoms immediately. My symptoms were pronounced enough that PG&E responded quickly and took my meters out, as they yet insisted that soon it would be mandatory for me to have both a gas and electric smart meter installed, once again, at my house.

With the meters out, I felt better. Although, my EHS became more heightened as I went into stores and was near cell phones.

But then this summer PG&E installed three smart meters adjacent to my house. And it turns out PG&E had, in fact, lied. They had given me instead two hybrid smart meters. Again my physical condition has deteriorated. Chronic migraine, ringing and pressure in my ears that become stabbing pain in my neck and shoulder, insomnia, increased neuropathy, nausea, etcetera.

When I go to the beach or hiking away from the EMS my symptoms quickly subside. The whites in my eyes have become alarmingly gray and pink. Most of my electricity is turned off. So you can see, I'm struggling. But enough on me.

In 1998, the California Department of Health took a comprehensive survey and found 120,000 Californians could not work due to electromagnetic sensitivity. While I'm sure like me, they soon will have no place to live let

alone work. In 1990, the EPA cited EMS as a probable carcinogen but the utilities, Telecom and military bullied them out of it.

In 2008, Obama's cancer panel absolutely named EMS as a carcinogen. All of the in-depth scientific evidence is stacked against RF radiation. Whether it shows the blood barrier to the brain dangerously opens up or male sperm count drops dramatically. Or, finally, DNA strands break apart causing cell mutation and cancer. We live in ever increasing amounts of electro smog and cumulatively this puts all of us at risk, not just those with EHS.

But the smart meter takes the cake. It is the atomic bomb of RF radiation. They emit high, sharp, spike pulses every one to two minutes of microwave RF radiation. Electrical engineers have taken readings and believe it is 1,000 times stronger than a cell phone. That is the equivalent to 17 hours of cell phone use a day for each meter.

Business buildings and apartment building will have large clusters mounted close together. But PG&E continues to claim these meters are safe. There is no transparency, just this awful rush to put them in.

We have no choice. We cannot opt out. As I stated before, many many of us will probably get sick and have to move. But where are we to go? It seems unconstitutional and just plain unfair.

Every governmental agency we have gone to sends us spinning to the next. The California Public Utility Commission states that these meters are within the guidelines set by the FCC. In fact, president of PD&E, admitted these meters were not independently tested. They are taking the word of Silver Springs Network, the manufacturer.

But additionally, FCC regulations are very, very outdated and inadequate. We need the ADA to take a stand and be courageous and protect those like me with EHS but also the public at large. Or soon, the whole general population is going to be very, very sick, and disabled, unable to work, and with nowhere to go. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate your testimony today.

>> SUDI SCULL: Okay. Thank you for giving me the opportunity. I just really hope you can help all of us out, and especially someone like me.

>> JOHN WODATCH: Thank you. Next, we're going to have another telephone commenter, Terry Siemens. We're making the call now.

>> TERRY SIEMENS: Hello?

>> JOHN WODATCH: Is this Terry Siemens?

>> TERRY SIEMENS: This is.

>> JOHN WODATCH: We're ready for your comments.

>> TERRY SIEMENS: Thank you, members of the panel. And those who are listening in the audience, thank you for attending and thank you for listening to my presentation.

I wanted to take the opportunity to focus my remarks on CRT docket No. 110, and related to web access. And also CRT docket No. 113 related specifically to equipment and furniture.

I wanted to explain a little bit today how the increasing wireless radio frequency microwave radiation has made and will continue to make it more difficult for me in the workplace and also more difficult for me to access public facilities including universities, libraries, and government buildings.

These wireless Internet technologies, including Wi-Fi and web cams and their supporting structures, are increasingly difficult for me to avoid. As I, and others, access the Internet on web facilities in our communities and also in these buildings.

Specifically, I have a condition electro sensitivity that includes vasovagal episodes and has significantly affected me in the workplace recently.

Recently I was approved to participate in a full-time student teaching placement. Initially I was assigned to a school site with a cell tower located on the other side of the fence at the back of the school. I asked to be reassigned to a school site without a cell tower located nearby. Initially, I was turned down. I presented medical documentation from my physician and I was subsequently granted an alternate placement.

Next, I was placed at a school site with a wireless security system. Specifically, I was in a portable classroom that had a spherical-shaped object attached to the ceiling that pulsed a piercing type of energy that hurt my head. After as little as 15 to 20 minutes, I would experience nausea, difficulty concentrating or reading, short-term memory loss, slurred speech patterns, and finally, I would black out.

The classroom teacher and the students initially thought that perhaps I was falling asleep. I explained to the teacher that if I moved around the classroom that I could prolong the situation, typically for up to two hours. She watched and concurred that the movement helped me minimize the visible onset of my reoccurring symptoms.

I explained to the teacher and the principal and the university supervisor and the university department director that I had difficulty with Wi-Fi, and that I needed to be in a classroom without Wi-Fi.

They had specifically made arrangements that I would be in a classroom without any wireless technology near the computer equipment in the classroom. Unfortunately, no one, including myself, anticipated that there would be a wireless security system operating during the classroom hours as opposed to after the school was closed down for the day.

Unfortunately I was told by the principal that the wireless security system could not be dismantled in the particular classroom that I was in, that it would be across the entire campus and that was not an option. I was asked, eventually, to leave the school site after 4-1/2 weeks of a ten-week program.

I'm currently intending to start another student teaching assignment, and it would have begun today but they haven't been able to clarify my placement just yet due to my accommodations.

In addition to teaching, I'm required to take a state RICA examination. That too, I was assigned to a site with a cell tower and have subsequently asked for accommodation for that. They've told me that they have never had such a request for an accommodation. But there is no opportunity that I could complete a state examination sitting next to a cell tower.

I would encourage you to consider these -- thank you.

>> JOHN WODATCH: Okay. Thank you very much. We appreciate you taking the time to comment with us today.

>> TERRY SIEMENS: Thank you.

>> JOHN WODATCH: We are going to now have another commenter via the phone, Susan Molloy. I believe the call is being made now.

>> SUSAN MOLLOY: Hello?

>> JOHN WODATCH: Susan?

>> SUSAN MOLLOY: Yes.

>> JOHN WODATCH: This is John Wodatch. Welcome. We are ready for your comments.

>> SUSAN MOLLOY: Thank you, Mr. Wodatch. My name is Susan Molloy. I'm calling --

(Announcement interruption.)

I'm calling from Snow Flake, Arizona. I would -- by my count, I'm the 14th person today who has been planning to discuss barriers such as electromagnetic fields, Wi-Fi, cell, and chemicals.

(Feedback interruption.)

>> JOHN WODATCH: Susan? This is John. Could you -- you may be listening on the -- to the Internet and we're getting feedback from that. Could you --

>> SUSAN MOLLOY: Okay. We should be set now. Thank you. I don't have much to add to the 13 or 14 people who testified today about the barriers they face in the environment that go largely un-addressed.

The barriers I'm most concerned about would be the chemical and electrical barriers, also those that have to do with light and sound that we are including in our requirements under the ADA, and other laws, in architecture that are in fact creating barriers to many of us.

I am very curious to know, what are the prospects that we might have for Department of Justice to take a position in support of our issues? At this point, I think that there is an emergency in that the smart meters are being mounted on houses and apartments across the country, and many of us are absolutely defenseless in the face of these -- sorry -- in the face of these installations.

I did notice that there was one request for supplemental document that would be the focus on electromagnetic field, and Wi-Fi, cell, smart meter barriers. And I don't know if that's a realistic expectation for us or if the Department of Justice has another way to possibly make some kind of a public statement or back our play in a legal action, for example, that would protect people with these disabilities.

Specifically, we need intervention by DOJ, or someone, or an equivalent agency that can secure for us an opt-out provision so that the power companies have to give us an alternate way to get power metered from our houses than the smart meters.

Just very quickly, I'd like to mention a couple points that have come up today. The treadmill for exercise, and the treadmills that are in hospitals for evaluation of heart performance, both of those, recreational and medical uses, are -- we can only obtain them in one form and that is the electrical form that causes severe pain.

I don't know what is possible procedurally but I would very much like to put the brakes on this whole process for now to get intervention by Department of Justice to consider some kind of supplemental document.

I think that we're getting ourselves in trouble again, as we have before, by not looking in advance in a timely manner at the requirements -- by not looking in a timely manner at the requirements for safe access for people with certain disabilities and promoting good access or insisting on good access for people with other disabilities. Sometimes the requirements conflict and we're not being mature if we're not noticing that we need to coordinate our insistence for access for various groups.

(Pause)

>> JOHN WODATCH: Susan, your five minutes are up. If you will let me, respond a little bit to your question. We have started at our hearing in the District of Columbia, and certainly today, about these issues. I think, clearly, we have a lot of evidence to go forward and look at, especially the relationship of utility companies to Titles II and III of the ADA and looking at what options are open for us to further investigate and make decisions about whether they are regulatory choices or other choices.

Some of the comments -- we'll have to look at in depth at some of the comments that we received that are written. Because a number of people can in a five-minute presentation only make really summary kind of presentations. We hope to look at the information we get in more depth and then make some reasoned decisions about whether or not it affects the rulemakings that we have proposed, working with other federal agencies, as has been suggested by several of the commenters or, as you are suggesting, other appropriate action that might be taken.

But we will consider all of those very carefully. Thank you. Our next commenter also by telephone will be Mitch Pomerantz who is president of the American Council of the Blind.

>> MITCH POMERANTZ: This is Mitch.

>> JOHN WODATCH: Mitch, this is John Wodatch. Please go ahead with your comments.

>> MITCH POMERANTZ: Surely. Thank you. My name is Mitch Pomerantz. I'm the president of the American Council of the Blind. ACB is a major, national grass-roots consumer advocacy organization with 70 state and special interest affiliates throughout the nation.

I wish to thank the United States Department of Justice and especially to you, John, for the opportunity to briefly address some of our general concerns relative to the recently issued ANPRMs. More extensive written comments addressing specific concerns will be forthcoming.

Regulations must be drafted, which recognize the convergence of Section 508 of the Rehabilitation Act, Section 255 of the Telecommunications Act, and the recently enacted 21st Century Communications and Video Accessibility Act. Incidentally, a bill sponsored by the American Council of the Blind and just signed into law by President Obama.

Without taking such laws into consideration, the Department will be developing standards, which will be irrelevant because effective communications will be thwarted. ACB would argue, it is time that the ADA acknowledge these federal laws, which have become -- which have begun creating standards of accessibility.

ACB recognizes the Department's efforts, to date, to clarify that the ADA requires access to web information and services. If blind and visually impaired people are to compete on equal terms with our sighted peers, regulations must be promulgated which guarantee access to websites operated by both Title II and Title III entities.

The Department should clarify that audio description is an auxiliary aid and service, which assures effective communications. It is not a fundamental alteration of a theater's service and should be acknowledged in the regulations.

Let me comment here that the term "video description" is wholly inappropriate given that since 1981, the generic phrase referencing the use of language to provide access to visual images has been audio description. It is essential that the Department adopt audio description as the only appropriate term to describe this method of effective communication.

ACB believes that DOJ should unequivocally state that the accessibility of equipment is an inherent component of making programs, activities and places of public accommodation accessible.

We are convinced that people with disabilities have waited long enough for a clear statement by the Department that there is an affirmative obligation to assure that equipment used to provide access to programs and services under Title II and equipment being deployed in places of public accommodation under Title III must, within the constraints contained in both titles, be accessible.

Further, since virtually every piece of equipment today makes use of computers or are directly connected to the Internet or accessed wirelessly or via remote control, we must go beyond looking at equipment in a stand-alone context.

The accessibility of computers, whether in home appliances or public kiosks, must be a basic consideration in any regulations developed for equipment accessibility. It is no longer appropriate to see the regulation of equipment, the web and audio description, as separate endeavors.

All three of the ANPRM areas overlap. It is time that the Department considers adoption of general principles that clearly articulate the convergence which the computer chip has created.

In conclusion, the Department of Justice must take this opportunity to absolutely articulate that there is a categorical requirement for equipment accessibility, which applies equally to state and local governments and places of public accommodation.

The Department must champion principals of universal design, which will within a reasonable time frame, require Title II entities to acquire equipment that is accessible. ACB is certain that if justice adopts this unequivocal general principle, we will get to a place where equipment accessibility will assume the place it should as a civil right for people with disabilities.

And I thank you very much for allowing us to participate today.

>> JOHN WODATCH: Thank you very much, Mitch. Next, our next commenter will be John Waldo. Mr. Waldo, please proceed.

>> JOHN WALDO: Good afternoon. And thank you all for the opportunity to have some input about movie captioning. My name is John Waldo. I'm an attorney representing plaintiffs in ongoing movie captioning litigation in both Washington and California.

I'm speaking here today on behalf of statewide advocacy organizations for people with hearing loss in the states of Washington, Oregon, and Utah, and also speaking on behalf of two national organizations, the Association of Late-deafened Adults and the Collaborative for Communication Access Via Captioning.

20 years ago, the Americans with Disabilities Act envisioned bringing people with disabilities into the mainstream of American life. For some people, and I think especially those with mobility disabilities, ADA brought about rapid and meaningful improvements. But for those of us with the very common

but invisible disability of significant hearing loss, ADA is still far more promise than reality.

A particular source of frustration has been the movies, America's favorite night out. Technology today permits movies to be shown either with open captions superimposed on the print for certain showings and visible to the entire audience or closed captions visible only to patrons who request a viewing device.

Both methods fit squarely within ADA's definition of auxiliary aids and services because they are affective methods of making orally delivered material available to people with hearing loss.

As you note in the ANPRM, the vast majority of today's movie studio releases have captions prepared in cooperation with the studios. What has denied us the opportunity to fully enjoy movies has been the reluctance, if not the downright refusal of theaters, to purchase and install the equipment to enable us to view the captions.

That situation is finally changing. Guided significantly by a friend of the court brief that the Department filed, the 9th Circuit ruled last year that ADA requires theaters to show closed-captioned movies unless doing so would constitute an undue burden. Then three months later, this Department announced its proposed rulemaking.

We welcome DOJ's involvement and would urge you to make the 9th Circuit decision a nationwide rule to the effect that captioning is required unless it constitutes an undue burden.

That said though, we think the proposal that captioning should be required for only 50 percent of the movies phased in over five years is a giant step backward and is deeply flawed, both legally and factually.

Our legal objection is that ADA clearly states that auxiliary aids and services like captioning are required unless the entity, singular and specific, the entity can demonstrate that providing those aids and services would be an undue burden.

Because captioning is technically available, we think the undue burden inquiry is purely financial and must be done on an individualized case-by-case basis probably by a court. We don't believe that substituting a broad performance-based standard, which may ask too much of some but require too little of others, is consistent with a statutory undue burden standard.

Our factual objection is that many of the larger corporate theater chains can in fact show 100 percent of movies in captioned form. Cinemark, the

nation's third largest theater chain, has completed converting its Washington state theaters -- now, that's only two multiplexes -- to full digital projection. It has also equipped every one of those auditoriums to show captioned movies. We now have two fully accessible theaters, complexes, in the State of Washington.

Regal, the nation's largest theater chain, has informed us that essentially the incremental cost of captioning the second half of its 6,800 theaters to show captioned movies would be about \$3 million. That's big money, but put it in context.

In 2009, according to publicly available documents, Regal paid over \$110 million in dividends. Dividends. After the staff has been paid. After the leases have been paid. After the debt has been serviced. After you pay taxes on it. Dividends basically, according to some, are money that companies can't figure out anything else to do with so they pay it in dividends.

I would submit that three percent of your annual dividend cannot constitute an undue burden. Much more to say, I'll submit it in writing. Thank you very much for your time and for your effort on this.

>> JOHN WODATCH: Thank you very much, Mr. Waldo. We appreciate your testimony today. Next, we are going to hear from Shen Kuan. I hope I pronounced your name somewhat correctly.

>> SHEN KUAN: Hi, my name is Shen Kuan. I work at the Lighthouse For the Blind in San Francisco. I've been blind for more than 20 years. I want to talk about the web accessibility for blind people.

I want to emphasize how important it is for me, knowing that a website is accessible for me using my screen reader software, which reads the materials, the stuff on the website to me with synthesized speech.

It has been a challenge for me for many, many years to try to -- every time when I go to a new website, not knowing whether that site is accessible 50 percent, 100 percent or whether everything on there is readable to me or not.

Part of my job at the Lighthouse For the Blind is to help test out websites to find out whether it is accessible, and if not how to make it accessible. And having this set of guidelines can help me in knowing that all the websites out there are being compliant to these guidelines and making it accessible for not just anybody but also for visually impaired visitors to the site.

A couple of examples is; one, last year I attempted to purchase baseball tickets on-line. And when I got to the website, I found out that it was not accessible, because the choices for you to choose where you want to sit in a stadium are mapped out on a map on the screen. And that map was 100 percent not accessible to me.

So I had to end up calling on the phone to purchase my tickets. And if these guidelines had been available -- had been enforced, I think I would be able to make my purchases online independently.

Another example is when I purchase airline tickets online. With so many websites, different airlines have their own websites, and they all have different ways of purchasing tickets online. Not all the forms available online for you to purchase, for you to fill out your information, to choose where you want to sit, are standardized.

So every time when I go to a website, I always have to spend the first maybe 45 minutes getting myself oriented, learning how to use it, assessing the website, trying to find out whether it's accessible to me. And if not, then I would have to make that phone call asking to purchase the tickets on the phone instead.

So I think if the DOJ can adopt these guidelines for web accessibility, it will make all the websites standardized and make them all accessible for visually impaired people so that we don't always have to constantly struggle with our screen readers, trying to find out whether this thing is accessible or not before we can do what we need to do, purchasing tickets, buying online, or browsing the Internet, researching information. Different things are not always the same.

I wanted to ask that the DOJ consider adopting the web content accessibility guidelines for its standards for the websites. And that's it. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate your comments today. I'd like to point out that we have been joined at the front today -- Mazen and I have been rejoined by Christina Galindo-Walsh and Bob Mather.

Next, we're going to hear from Lisa Maria Martinez.

>> LISA MARIE MARTINEZ: Hi. My name is Lisa Marie Martinez. I, too, work for the Lighthouse For the Blind and Visually Impaired in San Francisco. And today I'd like to talk a little bit about the accessibility of equipment and furniture. In particular, the topics and areas that are near and dear to my heart, which is exercise equipment and furniture.

I really strongly believe that all exercise equipment should be accessible to those with disabilities. Many general cardio machines such as treadmills, elliptical machines and row machines require the operator to interact with the screen in order to set up the appropriate exercise program.

Blind and visually impaired people are at a disadvantage when it comes to the general health maintenance that they require since these screens are usually touch screens, with no tactilely discernible buttons. And they have no audio feedback, which can aid in the independent setup of daily routines.

As we all know, there's an obesity crisis in America. And different people have different reasons as to why they want to stay fit. Should people with disabilities be excluded from slimming down and taking control of their own lives, to prevent life threatening diseases such as diabetes and heart disease?

I've been an athlete the majority of my life, whether it was as a judo athlete, a track athlete or some other sport I was trying out. And I've encountered many different types of cardio machines and exercise equipment that I cannot access without the help of someone there to help mark the equipment for me or to tell me how to use it or just to get the machines started.

And then I'm limited to what I can do. If I wanted to change my program because it was too much for me, I'd have to either stop the machine and ask someone to reprogram, for instance, a treadmill program for me or yell for someone, hey, can you change this for me while I'm in the middle of trying to run.

Through simple technology such as audio feedback, similar to those technologies that Apple uses for their iPhones, blind and visually impaired people can access flat screens. Tactile buttons and high contrast buttons can aid in the quick search of a particular button. These little small solutions can make a big impact in someone's health.

I have yet to find a totally accessible treadmill or cardio machine. Oftentimes, I have blind people come to me and ask me how can they go to a gym and get fit. And I encourage them to talk to the managers at the gyms and explain to them that with a little bit of innovation, they can possibly mark up the machine and make it semi-accessible. But a lot of times they are faced with resistance.

The gym folks don't understand that we're not going in trying to destroy their machines and change them all up by putting a little Braille dot on it, or marking it so that we can at least know how to start and stop the machine.

And even if they are welcomed with open arms to tactilely mark a button, oftentimes they are taken off. So what do we do?

I know I would like the choice to improve my health and my general welfare by incorporating exercise into my life. It has been a huge part of my life. And I hope it to continue to be a huge part of my life. I don't require a different piece of equipment to get healthy. I don't want to have to pay extra for a machine that comes with accessible features.

If simple accessibility standards are considered from the beginning stages of design, then accessibility doesn't have to mean different or expensive. With the last minute I have, I want to talk a little bit about electronic and information technology.

I use ATMs and POS machines every day and kiosks every day. And I have to debate just how much personal information I want to give to a complete stranger just to finish a transaction.

If I want to pay using my debit card for a sandwich that I purchase during lunch, I have to give my pin number to a complete stranger. What if I drop that card and the person behind me overheard my pin number, picked up my card, and didn't do the right thing, which would be to give me back my debit card? But instead they went to my bank and cleaned out my account?

I cannot independently do this. And every American has the right to privacy. I can't go to an airport and check out -- or independently check out using a kiosk. I cannot do self-checkout at a grocery store. I have to rely on someone else to do that for me.

So thank you for listening to my comments today and taking the time and consideration to change things.

>> JOHN WODATCH: Thank you very much. We appreciate your testimony. Next, we're going to hear from Beth Berrenson.

>> BETH BERRENSON: Thank you for giving me the opportunity to comment on the importance of audio described movies. I'm a movie addict. I'm also a person who is partially sighted. My vision is 20/200.

What I see and what a person -- what a person sees -- a person who is 20/20, would see at 200 feet what I see at 20 feet. For me, I need to get close to that movie screen.

I also have a challenge when I'm seeing something on the screen that is obviously nonverbal. Lots of times, the nonverbal action is advancing the movie plot. I miss it. If it's not audio described, I've missed it.

This is perplexing to me, since this is moved along in a nonverbal way. Living in San Francisco, I have access to two screens that have audio description capabilities. Very often the staff at these theaters does not know about these facilities or they are not having audio described movies playing in them.

I urge the panel to consider training all staff to be familiar with audio description, and make it mandatory for each auditorium to show audio-described movies. The content is available to fill these auditoriums. More movie distributors are including audio description tracks with their new productions.

As the information and resource coordinator for Lighthouse For the Blind and Visually Impaired in San Francisco, I put out a weekly listing of all audio described movies in the nine-county Bay Area. Considering there are over 200 screens in the area, there are usually only about 10 screens that have audio description.

Those of us who are blind or visually impaired want the same opportunities to view movies as the rest of the seeing public. Being a baby-boomer, I grew up going to the movies. As we boomers age, more of us will be affected by vision loss. It just makes good business sense for the movie industry to include the blind and visually impaired in the number of the movie-going public.

I urge you to consider making all movie screens accessible for the blind and visually impaired through audio description. I also want to make one other comment about audio description when we go to buy movies.

More and more distributors are putting that content on a DVD or a BluRay. The challenge with that is that the menus on the DVD and BluRay are not audible. So even though the information is there for us, we cannot access it. To me there is something missing in that equation.

And I know that is part of the what the 21st Century Communication Act talked about also, and I urge you to consider making the menus on DVDs and BluRays audible so that we can listen to movies without having to include someone else. Thank you very much.

>> JOHN WODATCH: Thank you. We appreciate your testimony this afternoon.

Next we are going to hear from F. Ross Woodall.

>> F. ROSS WOODALL: Yes, thank you. I want to thank the Department of Justice for being here in San Francisco, saving the best for last, and I also

want to acknowledge the panel, that it is one of the most austere and good looking panels that I have ever seen. With that said, I am blind. (Chuckles).

>> JOHN WODATCH: You are terribly accurate.

>> F. ROSS WOODALL: As I said, my name is Ross Woodall. I am the co-chair of the Mayor's Disability Council for the city and county of San Francisco, California.

The Mayor's Disability Council acts as a liaison and a reference and gives input to the mayor, to the mayor's office on disability, and to the board of supervisors on any matters that have to do with disability issues.

We will be presenting our findings to you in writing after the meeting is over. As for the web content, we, since the web continues to be the medium in which most information is disseminated right now, and especially information that is of time sensitive nature, of an emergency nature, we on the Mayor's Disability Council are very happy and will heartily recommend that the provisions of WCAG 2.0 AA be utilized and put into force by the Americans with Disabilities Act by the Department of Justice. We feel that this is the best way to keep people informed, who oftentimes are shut out from watching TV and other means of communication that are simple for other people.

We also, I also want to talk about forms. Forms are of great interest to the council members, because they all realize that so much of our lives for those of us who are blind especially, we deal with forms on-line, ones that are inaccessible. Forms that will help us to get a job, and of course we have one of the highest rates of unemployment of any segment of the population. And anything that can be done to help the blind get back to work is necessary. These forms sometimes are very, very daunting. But we are very happy to see that the DOJ has agreed, even into the simplest forms of what might be approved today, in the level A comments, that forms would have to be able to be filled out on-line. And we definitely applaud this, and we are behind this 1,000 percent.

As far as personal use of the Internet, it has become my way of life. That is where all my information comes from. It is how I communicate. It's how I pay bills. Not able to write checks anymore. It is how I find out what is going on in the world, be able to find things out instantaneously, to be able to enlarge my network of friends and family. So the accessibility by people with vision loss and who are blind is not only important, it is mandatory.

I know of 85-year-old grandmothers who have gone blind and learned the Internet, and are now able to work with their -- talk with their grandchildren

and great grandchildren on the Internet. They have actually become techies. And so this is a medium that I think can help so many people to regain their quality of life and their independence.

I'm actually going to be turning it over now to the next speaker who is the other co-chair from the Mayor's Disability Council, who is Jul Lynn Parsons.

>> JOHN WODATCH: Ms. Parsons, you may proceed.

>> JUL LYNN PARSONS: Welcome to San Francisco. I'd like to echo my co-chairs' sentiments in saying everyone sounds wonderful. But I should first probably let you know that I'm deaf, and I'm reading the captioning that you are offering here which has offered the most effective type of communication in this situation, and allows us inclusion and equal access, and that is why we are all here. The common ideal is we need, we want universal access, and what forms and components does that come in?

So I'm delighted to be here today. We did have a hearing in December available on the city and county website, where we addressed these proposed rules. We asked our constituents what their feelings were about them. And so in that context, I'm here to reveal some of those findings to you.

In respect to the next generation 911, equal access to 911 services do not currently exist for people who are deaf or hard-of-hearing, and I can give you a personal example of that. I use a land line phone to call my recently widowed mother, and it takes several minutes to get through. That's annoying, with the relay operator. And in the event of an emergency, as you heard previously this morning, I believe, that could be life threatening, a matter of minutes.

So this already is discrimination against this particular class. And the clearest approach to web accessibility and at the same time not dependent on specific technology or programs, okay, I'm going by my notes and what I meant by that was WCAG 2.0 is primarily what we were advised to recommend by the experts that we heard. And that was level AA. Ross brought up one of the concerns which were formed, the other concern we had were captions and web streaming. And I'm proud of the city and county department of information and technology services, because they have archives of meetings that, click a little button and you get captions, or you get a little text right next to it.

So we need that, a lot of websites don't have that that Ross mentioned this is how we get our information. We can't go out in general public, unfortunately general public doesn't look like this room yet.

In regards back to WCAG, the guidelines have already been in place for some time, and will reduce confusion. Basically what I want to say on that was WCAG compared to 508 compared to standards of performance, and we chose WCAG. We just thought they were clearer. They left more room for improving technology, basically. That is the short story.

We will be giving you something in writing, because I will not go over my time. I've been sitting here all day with you folks too and I'm anxious to hear what everyone has to say just as well. 911, it's an archaic system, it's analog, which is what we discovered. That means that people who are deaf or hard-of-hearing cannot use the regular phone basically.

I have a portable TTY. I don't use it with my iPhone. I had an emergency last year. I had to text my daughter in Seattle, to have her call the police down here in the Bay Area. And I was lucky she was available, because if she wasn't, I wouldn't have had that access. And I know I'm not alone there.

So we really promote the idea of Internet protocol on the 911 system, with all deliberate speed, I might add. And that would include text messages, instant messaging, e-mail, and video communications.

I think you really need to be robust in your broadcasts like that. Timing, that would be affected by the state's ability to finance an entirely new network. We understand that. California may be prompt to do so because there is a mechanism in place and that is a tax increment on everyone's phone bill. So we encourage the Department of Justice to require no more than a five-year time line to implement the new system, especially in those states with a funding mechanism already in place such as California because this is a key access issue, and there are few issues that are more important than that. And it will literally save our lives to bring us into the 21st century with 911.

I see there is a little red light going on, tiny little light, I may have missed it for a second. We will be happy to submit our further findings to you and we're very pleased to have you come visit us today. We hope that you will return and we can work with you in the future. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate your being here today. We also appreciate you reaching out to your community on our ANPRMs. Thank you for doing that.

Our next Commenter will be via the telephone, and is Mr. Mike Tinkey. Mr. Tinkey, go ahead.

>> MIKE TINKEY: Good afternoon. Thank you again for the opportunity to address you again in response to questions number 14 and 15 regarding addressing the needs of golfers with mobility disabilities, scoping

requirements for accessible golf cars and questions 23 and 24 on the impact of small entities.

I'm Mike Tinkey, the deputy director of the National Golf Course Owners Association, NGCOA. We promote best practices in reaching out with to golfers with disabilities, through education, staff training, programming, and facility modifications, are large part of that focus. We proactively educate and inform through golf business magazine, seminars and member calls. We have found that a multi faceted approach is need to serve golfers with disabilities. One size doesn't fit all. As part of the process, we have sought to provide access to accessible single-rider golf cars through acquisition and pooling. Experience in the field has demonstrated there is no silver bullet or monolithic approach such as providing single-rider golf cars to address the needs of most golfers with disabilities.

Number one, pooling works. Starting approximately three years ago the NGCOA coordinated an accessible golf working group made up of representatives of the largest multi-course companies in the United States. We exchanged information on who had single-rider golf cars, where they were located, and coordinated a program where golfers are pooled among courses based on a request and reservation by golfers.

We expanded this program to our chapters and membership at large. Even with very few single-rider golf cars in circulation, we have been able to increase access to golfers by pooling and I can only think of a couple instances where the golfers was not accommodated. And these few cases they subsequently were.

Number two, pooling works in municipal facilities, companies like American Golfer, who operate many municipal facilities, the City of Indianapolis, courses and programs in Chicago and many others, pool their golf cars effectively. Number three, even at military courses, preliminary research indicates that the mandate they have two single-rider golf cars per course was an overreach.

Number four, among the general population, civilian population we found little or no demand for single-rider golf cars even where they are being aggressively marketed and promoted. In fact, in many cases disabled golfers prefer traditional golf cars with or without a chauffeur. Golf is a social sport and they prefer to ride with another golfer.

The number of golfers with mobility disabilities that are not being served by using a traditional golf car, traditional golf car with chauffeur or traditional golf car with hand controls or with access to tees and greens is very small. Where there is request for single golf car they can be served through pooling arrangements.

Technology is rapidly evolving and today many wounded warriors are able with prosthetics to have mobility that just a short time ago would have been thought impossible. Single-rider golf cars are just one form of technology and the need is diminishing as technology offerings alternatives. Finally and importantly, there are no ANSI safety standards or certification for single-rider golf cars although a new group has started the process to do so. Therefore, golfers, course owners and operators operate them at their peril. We need to understand the potential unintended consequences if there were to be a mandate.

Regarding 23 and 24, single-rider golf cars cause twice as much as traditional golf cars or more and they only can only be used by one, not two golfers. Thus they are much more expensive. Traditional golf cars easily pay for themselves because income is more than the cost of the cart. Given the limited demand, there is not a case for the single-rider golf car, mandating their purchase would pose a significant economic burden to small business owners of golf facilities at an already challenging economic time and would fail to address the need that is not currently being met by other means.

Single-rider golf cars do not provide a panacea for golfers with mobility disabilities that some alleged. Multiple examples for many years demonstrated that golfers with disabilities are playing and accommodated primarily using traditional golf cars. More than ever golf course owner and operators are reaching out to individuals with disabilities through education, staff training, inclusive programming, facility modifications and sharing the best practices including pooling.

On behalf of golf course owners and operators, I applaud your efforts to get it right relative to accessibility inclusion, for individual disabilities, and we look forward to working with you on solutions that accomplish your laudable goal in a realistic efficient and affordable way. Thank you so much for your time today.

>> JOHN WODATCH: Thank you for your participation today.

Are we going to proceed to -- we are trying to set up a videophone conference, but it looks like that isn't happening this second. So we will proceed with Dmitri Belser. Mr. Belser, please proceed.

>> DMITRI BELSER: Thank you. I thought at this time in the afternoon I'd start with the four happiest words in the English language, I will be brief. (Chuckles)

I'm Dmitri Belser. I'm the president of the Ed Roberts campus in Berkeley, and I'm also the Executive Director for the Center for Accessible

Technology. And the Center for Accessible Technology has worked in the area of website accessibility for about ten years. We provide consulting work and also work with individuals with disabilities, for access to assistive technology. Web accessibility is an incredibly important issue. Websites are the virtual front door for people these days. Most people don't go to businesses first; they are first going on the web and looking at sites. And for people who don't have access, it is a real problem.

I think there are people here and people you've been listening to all day who have described the issues of website accessibility in ways that are a lot more articulate than I am. But there are just two comments I want to make. One of them is that a mistake that people make around website accessibility, is that they think it's an issue for blind and low vision people, and as a person who is blind, I believe that. But I also want to say that there is a lot more to it than just that.

That web accessibility impacts a lot of people with other disabilities, for example people with mobility disabilities for whom multiple clicks and going through many pages may be difficult. There are a lot of things that can be done to make websites accessible for all people.

The other issue I just want to touch on, I think that a lot is often made around the cost of website accessibility and in fact, I don't believe the cost is a significant factor. Certainly in the same way that in architecture modifying an existing building is more expensive than building a new one that is fully accessible, modifying existing website can be hard to do, but with education, web developers can develop websites that are accessible and the cost would become virtually negligible.

So those are my only two comments. Thanks very much.

>> JOHN WODATCH: Thank you very much. You were true to your word.

>> DMITRI BELSER: As always.

>> JOHN WODATCH: Are we ready to proceed with the videophone call? No? Okay. Our next commenter, thank you for coming out, is Vera Hill. You may proceed.

>> VERA HILL: Thank you, good afternoon. My name is Vera Hill. I work with the City of Sacramento's police department. I am a supervisor in the communications division. I want to say first of all thank you very much for this opportunity to speak on behalf of the deaf community today regarding the issue of services. The Sacramento police department is dedicated to the service for all members of its community, and addressed the need for the

direct contact with the emergency services with the device that we call the pager for the deaf.

Back in February of 2003, we were approached by a member of the community who asked us, what happens if my cousin or anyone else who is deaf is involved in a vehicle accident or some other sort of situation that requires them to need an emergency services? How does she access these services?

How many text messages must she send to friends or family in order to get a call made to the local police or fire or other emergency services for help? What other options are available for her to gain direct access?

Well, I can tell you that when I personally was involved in a vehicle accident, a bad vehicle accident, as I was the driver, drunk driver hit me, left me out with my car totally disabled, fled the scene, I as someone who is hearing pulled myself together, picked up my cell phone and called 911. Obviously I had direct access.

However, someone else finding themselves in that situation, someone who is deaf, doesn't have that access. So, what we came up with again is the pager for the deaf.

It's a direct avenue for someone who is deaf to make contact with our agency in the case of an emergency, and eliminating the need to notify any third party. Again, this is direct access, gained simply by dialing the number which can be programmed into the cell phone, to receive immediate assistance.

The dispatchers answer the pager for the deaf as they would a 911 call, and 911 calls are the highest priority, therefore, answered prior to any other lines.

Should a dispatcher be on the line with a nonemergency call and a 911 rings, the nonemergency caller is immediately advised that the, the nonemergency caller is advised the 911 call must be answered and that nonemergency caller is placed on hold.

Should the pager for the deaf sound off, while a dispatcher is on a nonemergency call, that nonemergency caller is told the same thing, and the pager for the deaf is answered.

It's treated as any other emergency caller would. The conversation between the caller and the dispatcher, it continues until the emergency services arrive, or there is otherwise no further need to remain connected.

Should the other sources need to be contacted, to render assistance, such as tow truck, the fire department, some other entity, the dispatcher does so via land line while conversing with the caller on the pager.

The caller on the pager is advised of what services are being given to them. Also, if the caller happens to be at an agency or area that is outside of the direct scope of responsibility for our department, we are not going to tell them, "No." We immediately let them know that we are contacting that agency, tell the agency what's going on, that we have someone who is deaf using our pager, and tell them exactly where they are. We again stay on the line with that person, stay on that pager until they get help.

Sacramento police department's motto of working in partnership with the community, protecting life and property, solving neighborhood crimes and enhancing the quality of life in our city is taken very seriously. This low cost method of holding responsibility to our community, specifically deaf members of our communities, is an invaluable tool which serves to potentially save lives. Until the next generation 911 provides the ability for those who are deaf to gain immediate direct access to emergency services, this pager system is an essential element which allows us to provide the highest level of service to the deaf community, in the interim.

Again, I would like to truly thank you for the opportunity to provide you with an example of an existing service designated specifically for the direct access of those that are deaf and need emergency services.

>> JOHN WODATCH: Thank you very much. We appreciate your testimony and your efforts to provide direct access for people who are deaf or hard-of-hearing in your community. Thank you.

Next we are going to hear from Richard Thesing.

>> RICHARD THESING: Is it possible to give these to the panel?

>> JOHN WODATCH: Sure. Thank you very much. Go ahead.

>> RICHARD THESING: My name is Rich Thesing and I represent mobility golf, which is a nonprofit corporation with a mission to increase golfing opportunities for those who can't walk. Due to the limited time, I would like to focus on the objections of the golf industry, safety, lack of demand and cost.

As a disabled golfer, I'm very concerned about safety. Last year mobility golf became accredited by ANSI and started the process of developing safety standards for accessible golf cars. We should complete the process by the end of the year. We have on our committee internationally

recognized experts on golf car safety, and mobility device safety standards. Our committee also includes two golf industry representatives who appeared before you at earlier hearings and expressed their concerns about the lack of safety standards.

Lack of demand: First let me say that so-called lack of demand is not a defense to compliance with the ADA. For example, a restaurant can't refuse to put in a handicap bathroom, just because it hasn't yet had a customer in a wheelchair. That said, the lack of demand is due to three factors.

First, very few people know that accessible golf cars exist. The golf car industry has done no marketing.

Second, very few courses have the cars. Only about 5 percent of the courses. There are several states where not a single course has one. Would you learn to play golf if you could only play at 5 percent of the golf courses? Third, of the few courses that have the cars, very few let the public know. It is very rare that their website states that they have an accessible car. That goes for the courses that supposedly are part of this pooling arrangement. There is nothing on their website that would tell you, you could get a car on some kind of notice.

The bottom line is that there is not going to be a lot of participation until the courses get the cars, and let the public know they are available. Excuse me.

Cost: The costs of an accessible golf car ranges from \$6,000 to \$10,000. The average operating profit for a golf course is about \$180,000. In this context, the cost burden is very reasonable. However, there is a way to totally eliminate the cost burden and make a profit. First, there is a small business tax credit. Most golf courses have fewer than 35 full-time employees. Suddenly a \$10,000 car costs \$5,000.

You can see from the pictures I gave you that an accessible golf car is quite similar to a regular golf car. It is universally designed so that you can use it, and I can use it. Every day, at every golf course, regular golf cars are rented to just one person when a threesome or one of a foursome wishes to walk. There is no reason why the single-rider car could not be rented rather than the regular two-person golf car. This has two economic advantages. The car will get revenue every day, and one two-person car can be deleted from the golf car fleet. Now we have the cost of a 10,000 reduced to zero, \$5,000 tax credit and \$5,000 reduction in the cost of the regular golf car fleet.

If the car were rented for 150 days at \$15, there would be revenue of \$2,250 per year. So now instead of a \$10,000 expense there is no expense, and revenue of \$2,250.

I'll say a few words about pooling. Every day at almost every golf course, many golfers show up without reservations and are able to play. I personally play 50 times a year. My normal practice is to call in the morning I want to play, and get a tee time later in the day.

Pooling would require me to know in advance when I want to play, which often involves predicting the weather. Requiring disabled golfers to provide advance notice is discriminatory. I'll be commenting further on this in my written comments.

In June of 2008, DOJ in deciding not to issue a regulation on accessible golf cars, stated that regulations weren't necessary because existing regulations were sufficient. The reaction of the golf industry was to continue to refuse to provide accessible golf cars. If DOJ again decides not to issue regulation, disabled golfers will be forced to bring lawsuits all across the country. This will be a tremendous waste of money, time and effort.

In conclusion, as I discussed earlier, we are about to solve the safety standards issue and I have shown how mandating accessible golf cars can make money for golf courses rather than cost money.

According to the U.S. census, there are 12 million Americans who use a mobility device. We have the right under the ADA to play golf. Please help us to attain that right. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate you taking the time and bringing this information. We will add the information you provided to us to the record.

Our next commenter will be Patrick Finlen. Mr. Finlen, please proceed.

>> PATRICK FINLEN: Thank you for the opportunity to provide comments on behalf of the Golf Course Superintendent's Association of the America, also known as GCSA. My name is Pat Finlen and I'm a certified golf course superintendent and a member of the GCSA Board of Directors.

GCSA is the professional association for the men and women who manage and maintain golf courses in the United States. As golf course management professionals, we work to make golf accessible to all by promoting policies and practices that consider the needs and safety of all golfers; promote the growth and vitality of the game and maintain the agronomic integrity of the golf course.

Regarding question 14, there is no one size fits all approach to accommodating mobility disabilities. Effectively addressing the needs of the golfers with disabilities requires a multi-faceted approach comprised of

education for both golf course operators and golfers with disabilities. Facility programs and policies must be modified and golf course staff must be effectively trained on ADA requirements and customer service best practices.

Golf cars are readily available that are adaptable for the addition of hand controls and swivel seats. Kits to retrofit a standard golf car are available through adaptable equipment suppliers and some golf course product suppliers. Adapting standard golf cars is a feasible cost effective option. The cost to retrofit standard golf cars with hand controls is variable and ranges from 500 to \$1,000.

The number of golfers unable to play by walking who require a specific single-rider golf car is low. Research and survey data shows most golfers with mobility disabilities can play if the facility provides a traditional golf car with access to tees and greens.

Standard golf cars in use today were originally intended to help people with disabilities navigate the golf course without walking. In essence, today's golf cars are readily accessible to all but a small number of individuals.

These golf cars are widely available and comply with existing standards as established by ANSI and national golf cart manufacturers association. Currently there are no safety standards for single-rider accessible golf cars. We agree with disability advocates and others in the golf community that safety is an issue, that must be addressed with the same level of ANSI standards and regulations that exist for traditional golf cars. Standards and safety testing for all single-rider golf cars must be in place before any recommendation or determination is made regarding their future use.

Regarding question 15, the U.S. Department of Defense mandates providing two to three single-rider golf cars at each of the 150 military golf facilities. Survey data gathered from these courses show that there is very little demand for this type of equipment. Only 16 of the facilities reported their cars being used more than ten times per year. Most of the 150 facilities have received zero requests for the use of these golf cars.

More than 80 percent of these facilities proactively promoted and marketed the availability of the accessible golf cars to their customer base, based on this data and similar data gathered from other golf operations around the country, some of which you have heard today, single-rider golf cars are not utilized by most golfers with disabilities. For those golfers who do require a single-rider golf car, the facility can make one available without having to own the car.

The pooling of single-rider golf cars in areas of the country has been an industry-led proactive model that successfully accommodates individuals with disabilities. Golf courses should not be required to purchase and own single-rider golf cars because pooling and sharing of such cars is an accommodation that is working and working well. Through cooperation among golf facilities, any demand for single-rider golf cars can and is being met.

Regarding questions 23 and 24, almost all golf courses in the U.S. are considered small business entities. Mandating that every golf course purchase one or more single-rider golf cars when there is little or no demand for such equipment, would impose a significant economic burden on these small businesses. The price of these golf cars ranges from 8,000 to well over 20,000 depending upon technology and design. This is a significant expense given the demand for such equipment.

GCSA is dedicated to achieving the mission of increasing participation of people with disabilities in the game of golf, and supports wholeheartedly that through the game of golf individuals with disabilities can become actively engaged in the social fabric of the community as well as derive health benefits that improve quality of life.

Everyone within a community benefits from inclusion and quality of life improves for all citizens when all activities are inclusive.

>> JOHN WODATCH: We appreciate your participation with us today. Thanks.

Next we are going to hear from Susan Mizner. Welcome.

>> SUSAN MIZNER: Thank you. Good afternoon. My name is Suzan Mizner, and I'm the director of the mayor's office on disability here in San Francisco. I want to thank you both for holding these hearings here in the bay area, the birthplace of the disability rights movement, as so many people have already thanked you, but also for holding the hearings in such an organized and accessible manner. You have set a very good standard and provide a good example for us.

I'm going to comment briefly on all four NPRMs, the advantage of being late in the day is that I will just try to fill in a couple of gaps and reemphasize some of what you have heard.

But my main message is that the mayor's office on disability supports moving forward with all four of these proposed rules, and we are very confident that they can be implemented and implemented quickly, largely

because with the exception of next-generation 911, San Francisco is already implementing these requirements.

Taking them one by one, websites, our city, website while it is based on the Section 508 guidelines and WCAG version 1.0, is very eager to move forward with WCAG 2.0. We believe that is a clear standard that is well-known and flexible with technology as it evolves.

And I would respectfully but strongly disagree with my colleague Dr. Luciana Profaca who testified earlier today that we should grandfather in old websites, and not require them to be updated. I think she is confusing architectural access standards with communication access standards. And our websites are such an important living and dynamic entity, that is becoming so increasingly important in terms of the form of communication, that we can't grandfather in any websites.

We have one request from the IT department at, in San Francisco, which is that DOJ consider implementing WCAG 2.0 level A, and their interest is that in very widely-based web platforms, where we have one web platform but hundreds of people within the city that post to that web platform, they are concerned about being able to ensure compliance with double A or triple A. Nonetheless, as was testified earlier, we do a very good job of making sure that there is real-time captioning on media that is on the web, and we think that is a very important piece to include.

Moving on to movie captioning and video description, this isn't really a Title II issue, but, again, we have something that we have already, that is parallel that we have done in San Francisco which is require that in all public televisions that broadcast, in the bar upstairs, in the gym, in restaurants, that the captioning be on. This was required by our board of supervisors and we have had no complaints.

We really support the testimony that has come earlier in the day, in wondering what the concern is about just requiring opening captioning, for essentially all movie theaters. We do need to give a break to very small movie theaters that have old technology.

But, essentially all movie theaters all the time, that's what we need. I would echo Beth's support of audio description, Ken Stein in our office organizes a showing of super fest films at the ADA anniversary every year. And we have audio description and captioning for all of those. It's a very popular event.

Accessible equipment and furniture, again, we were able to install accessible scales and accessible exam tables, in all of our community clinics with essentially little expense, and we absolutely need your help with accessible kiosks. It's true we have had accessible ATMs but the airport,

John Martin, the head of our airport has been fighting with the airline industry for years to make them make their websites, their kiosks accessible.

We need your help there. Next-generation 911, that is the one thing we don't have. My short answer to all of your NG 911 questions about whether to include instant messaging, e-mail, SMS, real-time texting, video relay service is, all of the above.

We have heard from the deaf and hard-of-hearing community who don't use text well, and that video relay is very important.

So I will just close by saying that while we do feel we are in the most accessible city in the country, we recognize there are more, there is much more work to be done. If you have any problems while you are here, please call our office, 415-554-6789. Thank you.

>> JOHN WODATCH: Thank you very much. We appreciate your testimony. Thank you.

And our next commenter will be by the phone and we'll be hearing from Soula Pulver.

>> SOULA PULVER: Hello? Am I on?

>> JOHN WODATCH: Hello, please proceed.

>> SOULA PULVER: Hi, this is accessible, under accessible equipment. The new so-called smart meters, are equipment that is not designed for people who have the disability called electro-sensitivity, nor for people who have implanted medical devices who must avoid Wi-Fi and RF emissions.

Utility meters are ubiquitous and unavoidable. Traditional utility metering equipment exists that can provide safe electrical and gas service. It should be required to be kept as an accommodation, and not changed for the new smart meters. Also, in all public buildings, traditional analog meters should not be replaced by wireless smart meters, which give off radiation that creates a barrier that people with electro-sensitivity cannot cross.

Now, about electro-sensitivity, also known as radio frequency sickness, which is caused by exposure to transmitted radio frequency radiation and electrical pollution, as a disability. Since this massive deployment of smart meters began in California this year, I have personally made the acquaintance of three people who were not at all electro-sensitive before their house had a smart meter put on it. And I have heard about many more cases just like this, people who never imagined such a thing could happen to them.

I urge you to recognize and address electro-sensitivity in the ADA. It is urgent and crucial that this emerging problem that is causing so much suffering be recognized. People are becoming electro-sensitive, because of smart meters, and there are also many people who already have this sadly unrecognized and therefore scorned and shaming condition, pre-existing, who have had it exacerbated by smart meters or who are trying to flee from the oncoming tsunami of smart meter installation. They are selling their homes and uprooting their lives.

I have met and talked with dozens of people in this situation in the past few months now. This is a real thing. It's a true physical disability. People's lives are being ruined. If they can get away from wireless radiation, electro-sensitive people are fine. But it is becoming impossible. The worst their electro-sensitivity becomes, some become unable to use a computer, and unable to communicate using modern technology.

Finding housing is a nightmare. People are becoming homeless. You can see video testimonials by Googling wounded by wireless, that's wounded by wireless. I know that you have already heard from at least one doctor who testified during the December hearing about electro-sensitivity as a true physical disability. There is science behind this, in spite of near nonexistent funding for independent studies. There are thousands of studies that show bio effects.

You can go to a website called prove-it dot CO. That's prove-it.co, not dot-com, to see a collection of studies. And please look up Sweden and the accommodations that Sweden makes for electro-sensitive individuals. That is an example to work towards. Again, finally, I urge you to add and recognize electro-sensitivity to the ADA, in the ADA.

It is urgent and crucial that this worsening problem that is causing so much suffering be recognized. That's the end of my testimony.

>> JOHN WODATCH: Thank you very much. We thank you for taking the time to be with us today.

>> SOULA PULVER: Thank you.

>> JOHN WODATCH: Next, we will hear from Luis Arteaga. Please proceed.

>> LUIS ARTEAGA: Thank you and good afternoon. My name is Luis Arteaga, and I'm director of emerging markets for the California emerging technology fund. The mission of the California emerging technology fund is to close the digital divide here in California by celebrating the deployment

and adoption of broadband to unserved and underserved communities here in the state.

We are going to be speaking about web accessibility today, lending our expertise on that issue. As you already mentioned our mission is to close the digital divide. First we had to address the issue of access. Fundamentally, we knew that we had to address the issue of lack of access for people with disabilities. When we first started to monitor polling and data looking at people with disabilities and access to broadband, what we found is that only 36 percent of disabled households had the technology at home. You have heard from many people today talk about, tremendous amount of benefits broadband provides and it's no surprise to anybody in this room that without it, life is fundamentally harder and different for you without that access.

We made people with disabilities a priority community for our investments. We are a \$60 million fund. If we were going to close digital divide, it had to happen among people with disabilities, low income urban poor, as well as rural communities of the state.

We are fortunate to now two years later, the data shows that 55 percent of the people with disabilities now have broadband access at home. Overall, it's 70 percent in the state. Clearly there has been some progress. But lots of room for improvement, if we are going to close that divide.

The other area that was important for us if we were to do this, was to address the issue of web accessibility and content. Not just for people with disabilities serving organizations but really all the different digital inclusion, computer centers, grantees that we were going to fund to ensure they would also elevate their importance of web accessibility and accessibility in general.

As a condition of our grant, of our grant funding, we require the completion of what is called an accessibility plan, and the plan covers what changes need to be made in the organization's program content, their website, their facilities, their outreach and communications, their technology, and their etiquette.

The plan then has the organizations determine the person responsible which is really important for any type of accessibility work, who is the point person going to be. But also, what the cost of those changes were so we didn't provide an unfunded mandate. We wanted them to lay out their plan to get a good glimpse of what it's going to take to be fully accessible, and then slowly and surely we will provide the funds to address some of those key changes that were necessary.

In order to provide the training, we reached out to the experts. So we have as some of our grantees, for example, the World Institute on Disability, and the Center for Accessible Technology, you heard Dmitri Belser speak earlier, as the consultants that will help these nonprofits community-based organizations improve their accessibility.

As I mentioned, it is a condition of the grants so if they do not complete the plan, there will be no funding. So far, 98 percent of our grantees have submitted their plans, as you can see, it's very effective. I don't know who the 2 percent are that still haven't. But clearly, if it becomes a priority, you can act accordingly and change will happen.

We are also proud to say that accessibility continues to be a priority with our two NTA grants that were given for us to expand the broadband awareness and adoption efforts that exist in the state.

We knew and the grantees now know that they need to increase their services to people with disabilities and they found they improve their services across the board not just for anybody, but the more you are conscious about the perception with the new audience, the greater, the quality of the services are going to be. That is what they found. In addition CTF as well as the Center for Accessible Technology sponsors the California digital inclusion awards.

What these are, are awards that are given to organizations that voluntarily work with center for accessible technology to improve their websites. We have seen, this is the third year of the awards, phenomenal changes in websites that are, that serve the public. So public agencies, nonprofit agencies, private sector industries, like Intel and Gap have provided -- participate in this voluntary program.

The Stanford Accessible Technology will be hosting the third annual awards on January 26, and this really is a tremendous showcase for web accessibility and really get to see how voluntarily industry nonprofits, government have made this change happen.

To sum up, web accessibility in order for it to continue to thrive and prosper, it has to be made a priority for the organizations. I mentioned having a point person makes the big difference.

Two is working with experts. There is lots of software, things that will test websites and things like that. And working with the center for accessible technology, we found they are good but not great. Working with the experts can really help you improve those website accessibilities, but also give you a roadmap of things you may not have the money to do.

Third is provide support.

Four is monitor progress, making sure there is progress being made along the way.

Finally to move this forward, to acknowledge excellence in this effort. To really see the before and after of web accessibility, it makes a big difference. Thank you.

>> JOHN WODATCH: Thank you for sharing what you have been working on in the community.

Next we are going to hear from Steve Sarrens. Mr. Sarrens.

>> STEVE SARRENS: Thank you so much. I wanted to say that the panel looks pretty alert, which is pretty phenomenal seeing that it's, what time, 4:05 or whatever it is. Love seeing the smiles up there. It's a pleasure to be here. My first name is Steve. Last name Sarrens. I'm from New Step out of Ann Arbor, Michigan. I had the opportunity to fly out here today. I'm here to speak to furniture and equipment, specifically exercise equipment, inclusional fitness for fitness centers.

Earlier today, we heard from Kristina Ripatti-Pierce, the LAPD police officer who is paralyzed from the chest down. She has been a spokesperson of New Step for the past four years. For those that saw her today, you saw a very determined young woman, but there is more to the story that I'm very familiar with.

Kristina Ripatti was an athlete before she was injured and she still is an athlete. In my dealings with her, and I've been to her home and seen her exercising on our product, the New Step. After 45 minutes of exercise, she was with a young man who watches her during the day, and I was inspired to do something. I mean, to watch her exercise for 45 minutes just using her arms, with her arms helping move her leg is truly inspiring.

Kristina is one of many extraordinary individuals, in a day; for her to get here that morning, it took her probably two hours to prepare to be here for the presentation so when you look at people like this, they are beyond the norm.

As someone who is able-bodied, I just couldn't handle watching her exercise for 45 minutes, doing nothing. So I, asked the 10-year-old in the room, would you like to have a push-up contest? So we did. And the young man did, I think 20 push-ups, which is remarkable for a 10-year-old. I went up and did 42. Not bad for a 50-year-old. I'm 55 now. I think Kristina got off the New step and said I want to take part in this. She got off the wheelchair, she moved her body with her arms to a core ball. She balanced her pelvic

area on the ball. I grabbed one leg. Austin took the other. She went ahead, pulled her arms out and did 52 push-ups.

There isn't equipment available in the clubs for people like Kristina. The integration of people like her going into the mainstream is only going to inspire able body people to do better. We are all here on the earth for a very short time. We are all going to get older. We are going to age, and we will eventually pass away.

But the key thing while we are here, we want to be the best that we can. There is recent research out, and one of the big fears is with cognition, and losing cognition. There is a quote, I read this actually just this morning, and one of the key elements to help cognition and even to help ward off Alzheimer's is something as simple as exercise.

It's the one pill that all the side effects are positive. It says here, physical exercise is one of the great candidates for helping cognition, simple aerobic exercise such as walking 45 minutes a day three times a week improves episodic memory and executive control functions by about 20 percent.

This sounds so easy, 45 minutes of walking. Think of the people that are not able to walk. In the industry, we need to provide, which we are, is equipment that enables people to walk in a seated position, and to provide the benefits.

For the panel sitting up watching the presentations all day, I bet an exercise break would help your reasoning and condition right now, you are experiencing what it's like to be in a chair all day long.

Movement is critical.

The way the state of the industry right now, we have been selling our products to physical therapy market, and the way it is now, the PT stays are very short. And so when people leave the rehab setting, they are sent home or maybe they go to a nursing home. Otherwise, people either go home or they have to find somewhere to do their rehabilitation. The rehab is not done.

The majority of people go home right now, and they don't do anything. All the gains they made in the PT settings disappear.

We are proposing an initiative to make a requirement that there is equipment that is inclusional, and that means able-bodied or people with physical impairments can utilize the product. In that case, when people go to the clubs, as they work out, they can increase their physical functioning, rather than decrease.

I can go on and on this. Another specification was on obesity. And I would consider that another disability. Of all the disabilities, even people in a wheelchair look down on people with obesity. It is important to have equipment that is -- has a weight capacity of 600 pounds, and is easy on the joints. I could go on and on. I know the red light went on. But I appreciate the opportunity. I hope there is more times to discuss this. But I think this will make a -- it will help make our country strong in the future if we provide inclusional fitness equipment. Thank you very much.

>> JOHN WODATCH: Thank you. We appreciate you coming to San Francisco today to share your testimony.

Next we are going to hear from Jessie Lorenz.

>> JESSIE LORENZ: My name is Jessie Lorenz. I'm the associate Executive Director at the Independent Living Resource Center, San Francisco.

You have an opportunity today to help bridge the digital divide. Today I'm going to talk a little bit about access to technology, including technology which exists in the built environment, and access to exercise equipment.

Let me start off by telling you that I'm having a baby. And I'm telling you that because one of the things that's come up as I've received care from my Title III healthcare provider is an on-line messaging system, in which my doctor and I can communicate with one another. I can type messages to her. But when she types messages back to me, it comes back not in text that is readable by my screen reader, but in a text that is actually an image. I don't think my Title III healthcare provider wants me to repost what she says on my blog or something like that.

Nonetheless, what that means is that all of my private personal conversations that I'm having with my healthcare provider have to be read to me by someone else who can see.

I don't know if any of you have ever been pregnant before, there is a lot of funny things that happen to one's body. It's unconscionable and also a little embarrassing that I can't get that information independently, and by myself.

I also want to talk to you a little bit about destination dispatch elevators. I know that my friend Walter Park was up here speaking about this earlier today. I know that Mr. Park and myself have submitted information and comments on this issue to your office. Destination dispatch elevators are the next generation of elevator technology. Right now we are seeing them in San Francisco, New York, a couple in Washington, D.C. and in Toronto. But it won't be long until these are rolled out around the country.

We have worked with the industry to develop standards that allow people with all types of disabilities, including those experiencing vision loss, to use destination dispatch elevators and I urge you to study this issue because the train has left the station, and the regulations need to catch up a bit.

I encourage the Department to move away from 508 standards, as 508 compliance standards really have not kept pace with the dynamic, ever-changing world of technology. The standards that I would recommend you endorse should you be looking to create something that is standards-based, are the web content and accessibility guidelines level 2.

Technology access is crucial to full participation in society. Some companies have done a really good job doing what most people thought, what people used to think was impossible. I'm holding in my hand an iPhone with a flat touch screen panel on it.

When this iPhone was released on June 19, 2009, I was able to leave the Apple store completely able to use the features on this phone. I'm completely blind. Apple decided to go that extra mile and make their technology accessible to individuals experiencing vision loss. Other companies I believe because the regulations do not require it, in a stringent enough manner, other companies such as Google have kept people with disabilities particularly those with vision loss out of the marketplace. The Android platform and Chrome browser are not accessible. I'm hoping that as part of these hearings and these discussions, you can help remedy some of the digital divide that the people are experiencing right now.

Technology access is crucial for folks at all levels of our society. But as is access to gyms and fitness equipment, people with disabilities deserve to be able to access treadmills and machines within the gym. That includes products that have audio output for treadmills and it also includes taking into consideration path of travel requirements inside fitness facilities for those who use mobility devices.

You have an opportunity here, you have an opportunity to send a message to people with disabilities that says you belong. You belong in all aspects of society and the only thing that should stand in between you and the height of your achievement is your ability to work hard and your willingness to dream big. Thank you very much.

>> JOHN WODATCH: Thank you very much. We are delighted to have you come and testify and we wish you much joy and happiness when the baby arrives.

>> JESSIE LORENZ: Thank you.

>> JOHN WODATCH: Is our next commenter going to be via videophone? We are going to hear from Patricia Brantz.

>> PATRICIA BRANTZ: (through interpreter) Hi. You want me to give my name? I am Patricia Brantz and I reside here in San Diego. Should I go ahead with my comments?

>> JOHN WODATCH: Please do.

>> PATRICIA BRANTZ: Yes, my comments regard movie captioning. There is several different techniques that are used to achieve this. There is what we call black box captioning, basically subtitles that is used for most foreign films. There is also open-captioning, OC, which is the whole audience will be able to see the, it will be integrated with the rest of the audience. You have RWC, rear window captioning, where you have a device where you can see behind you and see the captions there.

I think closed captioning and black box captioning you need to look up and down, but it's acceptable.

Later, with open captioning, similarly, it had to be, with the open captioning, you had the black box, that was the old technique. Now they have changed to the integrated captioning, which is very nice but the down side of that is that it's, the background, it might make it difficult to see the actual words across the screen. It is not as clear because of the background. If they are in yellow, for example, you can't see. If it's dark, you see it fine but if the back ground is light, it's frustrating, we can't read the captions as easily.

Now, my first choice is open captioning, where the whole audience sees the captions. Or rear-window captioning. The first time I saw that, I went, I felt after a while a little funny about it.

You had good, you have to have good guest services. Before they had better services about the equipment and helping get it set up and getting it positioned accurately. But now, I find that a lot of people are taking aback, taken aback by it. It is hard to find the right positioning for it.

You have to find the correct seat in the house. You have to come early, if you don't come early, it doesn't work out. It's inconvenient. With rear-window captioning you sometimes have to let them know, you don't have a choice of the week or, you do have a choice of the time you can come, but with open captioning you don't. It is very limited in terms of your time opportunities.

You might only have it out of four or five days one evening or something at a specific show, or specific time of day. Early morning or late at night sometimes. It is not convenient for us.

Open captioning is my first choice. It's just the issue is the scheduling with that and the limited time availability.

That is basically it. I think that covers my comments.

>> JOHN WODATCH: Thank you very much. We appreciate your taking the time to testify today and give us your views. Next we are going to hear from Karma Quick. Please proceed.

>> KARMA QUICK: Good afternoon, ladies and gentlemen of the panel. It's a pleasure to be here today. My name is Karma Quick. I am currently affiliated with the National Association of the Deaf Civil Rights Committee; I'm also proud to be the president of the Board of Directors for the Independent Living Resource Center for San Francisco. I'm also an alumna and a mentor to those serving on the National Association of Law Students with Disabilities. With that said, I fully 100 percent support the position of the National Association of the Deaf on the movie captioning. I fully agree that 100 percent of the movies being shown in theaters should be captioned, and I fully support mostly rear window and also support some of the movies be shown open captioned as well.

In fact, with regards to that, a friend told me last night that in San Francisco, I can find two theaters in this city that are captioned and that is progressive. My thoughts, that's progressive in a small town in Iowa. Progressive in San Francisco would be 100 percent of those theaters being captioned.

Moving on, I'd like to discuss some accommodations and medical facilities for people who are deaf and hard-of-hearing. There must be absolutely any kind of captioning, video relay services, voice over Internet phone services and remote relay and interpreting services available for people who are deaf and hard-of-hearing, in emergency rooms and doctors' offices and in outpatient services.

It is incredibly important that we have these resources and accommodations available to us, because one word being left out of a sentence changes the entire meaning of what is being said. And that is absolutely critical when diagnosing a patient, when a patient is giving the doctor his or her symptoms, or when there is an emergency situation, and action must be taken immediately.

Without these accommodations, there is such a high risk of a misdiagnosis and mistreatment or even death, and I can tell you that the Department of

Justice, your office, in the time span of fewer than three years, settled over 30 cases with medical facilities regarding the misdiagnosis, mistreatment and deaths of individuals who are deaf and hard-of-hearing because they were not granted their accommodations as requested in these situations.

I'd like to also discuss court accessibility. It is a fundamental right to access courts for all individuals in the United States. This is a right that is given to us by our constitution. Under Title II of the Americans with Disabilities Act, we have an absolute right to effective communication. Of course, as you all are aware, under Title II of the ADA, an ADA coordinator is required for all state and local entities.

I understand that these regulations require some sort of regard, some sort of equipment or functional purpose or what have you. But in terms of a state entity, before these equipments and furnitures can be given, you have to have an ADA coordinator at times who knows about these equipments and about these pieces of furniture and how they work with people with disabilities who are requesting them.

That means that these ADA coordinators also need to be trained. I can tell you from personal experience in the court system, as a law school graduate and someone who has been frequent, in frequent court proceedings and situations, I have had much difficulty getting my accommodations in courts, because of my communications with an ADA coordinator who is untrained.

Also in light of ADA Title II, the words "effective communication" mean a great deal. And effective communication is different in a doctor's office, when you are getting the flu shot, compared to when you are in the emergency room. I would strongly encourage this panel to look into finding some stronger wording or redefinition of effective communication, in these regulations that differentiate the particular conditions in which effective communication is used, because an entity cannot extrapolate the same meaning in a flu shot as they can in a cancer operation.

With that I would also like to finish my testimony by saying the deaf and hard-of-hearing communities wants TV monitors in gyms, banks, bars and restaurants to have captioning on those TVs. In San Francisco we are incredibly fortunate to have a city ordinance that already requires this. However I believe we are incredibly unique in that situation.

If I can simply add that captioning on YouTube, Hulu, and on certain network TV websites such as NBC and ABC, we also have difficulty accessing those TV shows as well. Thank you very much for the time and opportunity to present this to you.

>> JOHN WODATCH: Thank you very much. We appreciate your testimony today.

Next we are going to hear from Constance Barker. Ms. Barker, please proceed.

>> CONSTANCE BARKER: Thank you. My name is Constance Barker. I'm president of the Environmental Health Network of California. We are a 22-year-old nonprofit-based in Marin county just north of here and we provide support advocacy and information to the chemically and electrically injured.

I believe that earlier in the day, you have heard from a few of my colleagues, including Susan Molloy, most probably, and Sandra Ross, PhD, and Cindy Sage, all of whom have spoken both generally and specifically about the need not to neglect and to for once include the parameter of indoor environmental quality in any and all access considerations. I don't want to rehash what they have said. And you will be receiving from us some very extensive and specific comments shortly.

Instead, what I'd like to do is provide you with a couple of very specific examples of the kind of impact that this sort of thing has. In addition to being a person who is chemically injured, although blessed now, quite recovered due to a little miracle call the ecology house which I would love to tell you about sometime, I'm also at this point in my life a full-time home care provider to my ill spouse who is decidedly not recovered from these illnesses and has been getting worse. In the last three months we have had three hospitalizations, two in life threatening situations.

One of the things that I believe has been mentioned to you is the guidelines on page 44, where it discusses normal maintenance, reroofing, painting or wallpapering, not being considered to be changes unless they affect usability of a building or facility.

Well, I can tell you that when my partner was in the critical care unit at Marin General Hospital recently, suffering from a double pneumonia and sepsis, and very much in danger of not surviving, one of the things that happened while we were there is that normal routine maintenance was performed on the building, and they began painting right outside of her window.

At the time that that began, she had pulled fairly far out of the bottom of this hospitalization, she was off of the breathing machine, she was breathing on her own again, with some oxygen. But when that painting resumed, she started to go back downhill.

I'm on the county health commission. I pulled every string I could. I called everybody I knew who I thought might be able to shake some tree and get

something to happen. We did eventually get an air cleaner in the room and they did give me permission to use some painter's tape and to tape up the little cracks in the windows, the little places where tiny bits of air get in. And that did make some difference.

But she still, she plateaued at that point and never did quite get as better again as she had been at the point where the painting had begun. After a couple weeks, they released us home assuming she would not get much better and that this was just permanent. Well, slowly at home she went back downhill. A couple weeks later, we found ourselves back in the hospital.

This time, we were put on the other side of the same ward where there was not any painting going on. After four days on antibiotics in that ward her lungs cleared completely, and she came back home.

Now, I cannot strictly quote-unquote, prove this. But it seems to me that we had a whole second hospitalization here that would not have occurred, that was unnecessary, except for the fact that she was unnecessarily exposed to these paint fumes. These are the kind of things that we are talking about.

It is not just our civil rights here, not that our civil rights are not important. They most certainly are. But by the time you are disabled by something like this, you are living on government assistance on every level, including for your healthcare. She is a medi medi person. That's tens of thousands of dollars that the taxpayers paid for a second hospitalization that could have been avoided. It's just not good.

The second thing I will tell you about is the medical equipment involved. She had to be on breathing machines, biPAP machines, things like that, every single one of those machine has tons of plastic on it, all the air has to go through the plastic. She had to be fed through a tube that is plastic. There is very few requirements about out gassing. You don't look at the VOCs that are coming off those kinds of things. That is just a couple of small examples that I can give you, I can give you more but they are on my mind because they are what I've lived through personally in the last couple months. And anyone who deals with the critically ill person with chemical sensitivity would have similar stories for you where we would impact the healthcare system.

The broad recommendation is to look at the work that the access board did on indoor environmental quality, the Nibs website that I'm sure you have heard about. It was extensive, well vetted by our community and absolutely worth your consideration and attention on every level. Thank you.

>> JOHN WODATCH: Thank you very much. Thank you for being here today.

Next we are going to hear from Sister Ann Rooney. Sister Rooney?

>> SISTER ANN ROONEY: I want to thank you all for your patience, listening to all of us. We all want to be heard, especially the difficulties we have been experiencing in daily life. My name is Sister Ann Rooney, I'm a proud member of Hearing Loss Association of America, formerly known as Self-Help for Hard-of-Hearing.

Hearing Loss Association had been assisting for over 30 years; I'm the president of the California state Board of Trustees. I want to give you a quote that I think is really important that will help people understand a little better what hearing loss is. And that is, captions for the hearing loss person is functional equivalent as a ramp is for a wheelchair user. We all know what a ramp is; we all know what a wheelchair is. But we don't know what the hearing loss people go through.

We can be in an audience, we are there, we don't understand the words. I can't tell you how thrilled I was to see so many captions around here. It's thrilling to be able to see the words as well as to then understand of the words. Many times we hear the word but don't understand the word.

But Hearing Loss Association of America organization assists about 30 years, we've (inaudible) 30 years; it's mostly an organization of advocacy and education not only for the hearing loss person, but for hearing people. And that's really important.

Also, another thing we are trying to do is audio looping, different rooms, so that the person can understand the words better.

The board does far more than what the following I'm going to say. We do health fair, support chapters, we have 26 chapters in California, we recently started the walk for hearing event. And all these things are, we are trying to educate people, we are trying to let people know that there are many, there are 36 to 38 million hard-of-hearing people. We want people to know that there is more than hearing aids for them. We are working with teachers in classrooms, we would love to have plays on. And helping -- trying to help the Viet Nam, the veteran people when they come back. One of the things they do, because of all the loud noise, they have lost their hearing. And once you lose your hearing, you cannot recapture it.

I would love to see if DOJ can do something about these iPods. The volume is so high, these young people are going to lose their, what happens is they lose their hearing gradually. Once they realize they lose their hearing, it doesn't come back. If there is some way we can limit the volume of some of these iPods and whatever other equipment people use.

Carrie mentioned a lot before me. We would certainly like to have captioning in movies. As some people have mentioned before, we wait until they come out in video. We would like to be among people that go to the theater and able to see the movies as other people do. By the time they come out, people have stopped talking about them and they talk about something new. We are always behind. We like to be with the mainstream of people.

I certainly hope that we go through the full 100 percent, not 50 percent, not five years from now, but today, as soon as we can, because we have -- how do I say it -- we are not forceful enough and I hope this department can help us to achieve what we need in order to maintain mainstream.

I also would like to see, okay -- let's see. I want to state this for a fact, there are more people hard-of-hearing under 60 years of age than over. There is a misunderstanding that most hearing loss people are over 60. There are more under 60. I really would like to emphasize this, that what we are doing with the cochlear implants and hearing aids is amazing to see these little ones talk.

I saw a little girl who had a cochlear implant, and she was around two or three, and I asked her mother how she is doing. Her mother says, she hasn't stopped talking. For someone who never heard a sound and now she's talking. Technology has done great, but we need more and we need more effective technology.

I really want to thank you all for being here and patiently listening to us.

>> JOHN WODATCH: Thank you very much. We appreciate your testimony today.

Next we are going to hear from Mary Lawrence. Ms. Lawrence, please proceed.

>> MARY LAWRENCE: Yes, I am a resident of a low income senior house in Oakland. What I have to say is very brief, but I think it's very important. I heard about this meeting for the first time last Friday afternoon. So I did not have much time to prepare. And it states that you wish to know what furniture and equipment would be helpful to those of us with disabilities. All the things I heard about would be wonderful things and we would be happy to have them but they are not going to fit into a place which isn't big enough, as my studio apartment. It is 14 by 14 including kitchen, bathroom and everything.

Please pass the word to builders and anyone you know who is interested, that we need all one-bedroom apartments in both HUD and private

apartment buildings, no studios. Then we will certainly accept your offer of equipment suited to modern life. Thank you.

>> JOHN WODATCH: Thank you and we appreciate you taking the time to come and give us your testimony. I can tell you we have been through three hearings. That is the first time we have heard that. So welcome.

Next we will hear from Maya Cain.

>> MAYA CAIN: My name is Maya Kane. I've lived in San Francisco for 47 years and 31 of them in the same apartment. I'm a graphic designer and cultural exchange director. I'd like to list some of the health problems that are caused and exacerbated by smart meters.

For 30 years I had my tiny office, apartment office in one place, and it's across the street from a MRI hospital. It is 30 feet from the N Judith electric train going by outside that went outside the window 25 feet from a power pole. I was never an electrically sensitive person before. I was actually quite healthy.

Unknown to me, on the 30th of October, 2009, a smart meter was installed for one of my neighbors. Not even for my apartment. I began having terrible insomnia. I had less and less energy every day. I thought all these problems for a while was related to the insomnia. Then I noticed that I was a little bit dizzy all the time. Then I had strangely localized head aches. Then I thought that I had really horrific memory problems. It became worse and worse to the point that I finally could not even remember the most common words, and I couldn't speak. I couldn't spell. The speller on the computer said it was one thing. It looked just fine to me. It was really worrisome. I still thought that it was insomnia.

Then, this is the main thing about this condition that it was not mentioned in the big long article in the Chronicle, is that this is a very cumulative condition. It is a very slow cumulative thing. All these symptoms started slow and get worse. I noticed my hair was thinning quicker than before. The dizziness and memory problems were much worse, slowly worse. Then I started noticing that my face, if I happen to be in the bathroom, happen to look in the mirror, my face was bright, bright red. I knew that it was not the insomnia by then.

By absolute pure chance on Pacifica radio, the program is called Your Own Health and Fitness, Layna Berman, I just happened to hear her read a list of health symptoms caused by smart meters. I heard it. I ran downstairs. I noticed that one smart meter was 7 feet below the head of my bed.

It took me -- what I did after that, I got, I sent e-mail to her. She put me in touch with the EMF safety network in Sebastopol, and they helped me to get this smart meter taken out on the 3rd of March. I'm the only second person that has ever had one taken out.

After I found out what the cause was, but before they took it out, I was trying to avoid being near the smart meter, I was out on my porch potting a plant for half an hour one day and stood up and I couldn't walk. I was staggering. That is when I realized that my fuses had been blown, and I was fried and that I was now -- that actually I was close to the power pole, which was very close to my office, which meant I have lost my office now. Okay.

Here is another thing. My garage is occasionally used as a neighborhood theater, and one of the directors came by, upstairs, to tell me one time that as a person who never gets headaches, that he could not figure out why lately whenever he was in the garage, he got terrible headaches. Okay.

The process of getting the meter taken out was absolutely a bizarre experience with PG and E. They lied to me so many times. Three different lies to the same questions. They finally took it out. One of the things is, they told me they would send somebody to the apartment -- oh, gosh -- what you need to know is that it's cumulative and PG and E will tell you that they have permission to do this by the FCC. And that the frequencies are so low, they couldn't possibly cause health effects. But in fact, if you go to Cindy Sage's article, public health, implications of wireless technologies, it says on page 5, paragraph 2, that the lower the frequency, the more health effects. Okay?

I don't understand why they are -- why the government is allowing this, because ELF's have been used as a weapon by many countries, and I really can't understand why the U.S. is allowing these companies to radiate the entire population. What they did is swapped out my meter to a hybrid. The hybrid, they are going to throw all the switches on all the hybrids very soon, and many other people are going to be feeling the same way I was. Thank you very much for listening.

>> JOHN WODATCH: Thank you very much for coming and telling us your story.

Next we are going to hear from Ben McMullen.

>> BEN McMULLEN: Thank you. Good afternoon. My name is Benjamin McMullen, I'm a systems change coordinator at the Center for Independence of the Disabled located in San Mateo, California.

I would like to thank you for the opportunity to comment on places of public accommodation, equipment and furniture.

As we enter a new era of progressive, modern technology, we have seen more and more machines being utilized that had not even been thought of at the time of the passage of this groundbreaking legislation known as the Americans with Disabilities Act. Technology has made life much more convenient for countless numbers of Americans around the country today.

Technology touches our lives in so many ways, including using it when we travel, using it to communicate with each other across town, or across the country and even the world. We are also able to make purchases over the Internet and so on. In addition to being the professional advocate for people with disabilities, I'm also one who has lived with cerebral palsy since birth.

As a result of cerebral palsy -- as a result of cerebral palsy I've never experienced the convenience of driving. I have always had to depend on public transportation to get from place to place.

In addition to this, I have been one who has grown up flying as a result of having an extended family living in various parts of the country. While traveling has never been, has always been a bit difficult, I have always seemed to make it work out by the request of the wheelchair, to quickly navigate the airport, or asking if I can be allowed to pre-board in the case of the large volumes of people.

Once I moved from the rural South to the urban North, I became a more frequent traveler by trains. Train stations always seems to have high volumes of people one time. They did not help with the ease of getting from ticketing counters to train terminals.

As technology developed, we saw the emergence of kiosk machines. By and large, these machines worked wonders for the common traveler, and heightened the productivity in both airports and train stations. The trouble was, the airports and train stations became so reliant on these machines that they left behind a sector of travelers, those being people with disabilities. The problem was always a source of aggravation because I had to basically prove to the person behind the counter that I was unable to use the machine. I often found myself asking for help, which led to the person behind the counter explaining to me how to use the machine.

I would respond by explaining, my knowing how to utilize the machine, but my difficulty and the physicality of the process. My lack of manual dexterity made it difficult. I would often be instructed to a line where a ticket agent could process the ticket the old-fashioned way. This would require me to stand in very long lines. Eventually, after negotiating, they agreed to provide

me with assistance utilizing the kiosk machine. My time is limited so I'll wrap up.

>> JOHN WODATCH: You can continue for another minute if you would like to finish your train of thought.

>> BEN McMULLEN: Okay. I firmly believe, I have another example in a train station here recently that you all can read later. But I firmly believe that my friends with disabilities and I should not be subjected to long lines just based on our disabilities. Or the struggle of using machines with such difficulty.

We should be given the same right as anyone else to expediency. My first suggestion would be the airport or train station could designate an employee to assist travelers with disabilities, to use kiosk machines. This could be accomplished with little to no cost.

Another option is that these machines could potentially be voice-activated, where individuals could provide their ticketing information verbally into the machine. Lastly, the screen could simply be enlarged, allowing more surface area to work with. For example, I have a tremor which makes preciseness difficult. The larger an area is, the easier it is to touch and therefore select a choice.

I hope these three options that I have laid out can be used as a base for exploration which can lead to finding ways to make this process easier for people with disabilities. I would like to thank the Department of Justice for holding these hearings on such important issues. The Americans with Disabilities Act has done much to put me where I am today. It is our responsibility as Americans to work together to ensure that we keep this important piece of legislation current with times as they evolve.

Again, it has been my honor to provide testimony to you today.

>> JOHN WODATCH: Thank you very much. We appreciate your taking the time to come here and give us your testimony. Thanks.

>> BEN McMULLEN: Thank you.

>> JOHN WODATCH: And next we are going to hear from Joseph Partanski, who has had incredible stamina because you registered early today and have been sitting here listening to the testimony throughout the day. We appreciate your willingness to stay to the end of the day with us.

>> JOSEPH PARTANSKI: My pleasure. I'm going to talk about a need for the Department of Justice to be more proactive, more collaborative and

more able to, willing to enforce many of the things that have been talked today, particularly your new regulations. I have a particular message for Mr. Tom Perez and I appreciate if the counsel pass this on and you will get a contact in a minute.

I urge that the -- you look especially to study enforcement regarding each of the regulations that you will be putting forth. Issuing is not the same as enforcement. If published is one thing. DOJ should have a parallel staff, enforcement guide. In other words, whatever regulations are, of course existing ones, to have something that parallels that says, hey, how do you enforce it? What is the way? Who can do it?

And from the standpoint of collaborative, let alone proactive and let alone enforcement, I would think that some of these same guidelines for enforcement could be shared with local and state jurisdictions, who may also be interested in trying to enforce regulations in a way that might mediate and minimize your involvement from the standpoint of the Feds, keeping it down to local level. If you have some good ideas for enforcement, for your own staff, share it with the states and share it with the counties and local folks too.

Please give detailed observation to the suggestion presented by Mr. Richard Skaff, Mr. Walter Parks and Miss Bonnie Lewkowicz. These people are jewels, national treasures if not more than that. I really respect them. In fact, Miss Bonnie Lewkowicz is modest and didn't even show and tell you that she is the compiler with a team of wheelchair riders guide to the San Francisco Bay Area and nearby, and with the coastal commission, it's available on-line, both Northern California which is this copy, and Southern California for the website www.scc.ca.gov.

For activist issues that may come up later, my name is Joseph Partanski, I'm at accessjoep@yahoo.com; I teach a 12 hour course in accessing government information for advocates of various types as well the whole area of disability of access issues. I'm going to give two copies of this guide by Miss Bonnie Lewkowicz and let you know that her survey that she was modestly, just barely mentioned, I believe was one of the bases of the surveys of all the state parks in California that was sued; I think you may have been part of the case (inaudible), but anyway several years ago and Bonnie's efforts towards outreach for education, my county and city parks person was invited five years ago to one of her training sessions. We had one person from the national parks show up, to be part of the audience, what have you. My urging regarding enforcement is, hey, where are your own surveys of your own national parks and other related federal agencies?

There is a difference between having a judicial Attorney General kind of focus and having a real advocacy for the disabled federal-wide. So from the

standpoint of the issues of training, and outreach, to the extent that you not only train your own staff but have all federal agencies who have, possibly neglected to identify their ADA coordinators and from the standpoint of the new regulations, please have an outreach to all federal agencies to make sure that your federal regulations as modified are getting out there in a meaningful fashion.

From the standpoint of the agencies, I particularly like to emphasize the Bureau of Prisons. As you probably know, your publication that summarizes the various federal laws for disabilities and one of them is the institutional situations, institutionalized laws which include mental hospitals and prisons and I'm in a situation where I've been attending the California Council on Individual Offender for the last two years as an observer and, let me tell you, the State of California, and other states probably likewise, may have a department of rehabilitation but they'll say, "Hey, we are responsible for providing technical assistance to state agencies. We are not responsible to you as a citizen for advocacy. We are not responsible unless I ask," what have you.

When you ask, is there somebody, advocacy for the disabled in the State of California for the ADA coordinator for the state, there is no ADA coordinator for the state. Where is the point person to be held responsible and an advocate for the (inaudible) and disabled at the ADA? That is something applicable for 58 counties, 476 cities, and there have been very few ADA coordinators. You can almost count on your hands in the State of California with 40 million people.

Somewhere along the way, the issue of advocacy and disabled enforcement, from the standpoint of the federal level, regarding where is your ADA coordinator for the Feds, I have a nice impression. Follow the advice of the president. But from the standpoint of the Department of Justice, you are not the ADA advocate. Consequently, I strongly recommend that you get a person like or status like the drug czar for ADA. That person is not an advisor to the President. That person is responsible for advocacy throughout the whole agencies. Department of Justice has not that role. You have demonstrated that in various ways over the years.

I strongly suggest, and Mr. Perez, this is a publication of the Department of Justice. It reads, ADA, know your rights, returning service members with disability. I took this to the Congressional office of the VA, back when we had had a birthday party for the ADA in July. They had never seen it nor heard about it.

When you read this on the ADA, know your rights, returning service members, there is not a single reference to the VA in the whole thing. From the standpoint of the cooperation and follow-up, I strongly recommend that if

you have some way, shape or form have any revisions, that you talk and share with the VA because it's not there. I strongly recommend to Mr. Perez, if at all possible, to have a liaison with the Bureau of Prisons and the other federal agencies and have them noted so that once we as an advocate outside can say, hey, this is a lead person for the Bureau of Prisons, this is the lead person for the VA, you ain't got it, and we don't have a Presidential statewide national ADA advocate in your office.

>> JOHN WODATCH: Thank you. I can at least tell you in terms of that brochure, since it was done by our offices, that we have reached out to the VA and are having it distributed through their offices, and are working with them to try to get the information that is in there disseminated, so that veterans, particularly veterans who are returning now from the wars in Iraq and Afghanistan, have access to information about their rights as people with disabilities.

>> JOSEPH PARTANSKI: In July, they hadn't seen it. I gave them copies, on your behalf.

>> JOHN WODATCH: I appreciate that. Thank you.

>> JOSEPH PARTANSKI: Copies for yourselves. Thank you.

>> JOHN WODATCH: Next we are going to hear from Mr. Frank Welte.

>> FRANK WELTE: Good afternoon. Earlier this afternoon, you heard from Mitch Pomerantz, the president of the American Council of the Blind. I'm speaking in behalf of the California Council of the Blind which is the California State affiliate of ACB.

Since 1934, if California Council of the Blind has been working to improve conditions for people in California who are blind and visually impaired.

First let me turn to the issue of website accessibility. CCB is working for more than a decade in the area of website accessibility. Again you heard earlier from our attorneys, Lainey Finegold and Linda Dardarian, and over the course of our participation with them, we have had a great deal of success in making a variety of websites accessible, such as making websites, credit reporting websites, and various retail company websites. This has taught us an important lesson which is that website accessibility is both readily achievable and does not constitute an undue burden for organizations.

We think it's important that the ADA standards should follow the worldwide web consortium's ADAAG standards and also they should consider relative

laws such as the section 255 and the recently passed 21st century Communications Accessibilities Act. These are important standards.

Also though, that the Department of Justice should allow the standards to be sufficiently flexible to address the changing web technologies that will occur in the future.

In my previous life, I was a website tester. This taught me that most website accessibility problems can be addressed by the use of properly developed website html coding, and that website accessibility is both readily achievable and it is also inexpensive.

Also, there are a variety of website accessibility testing tools that are readily available to assist website developers in making their sites accessible. Many of those tools are free.

One practice which has happened in the past, is that organizations have tended to create secondary text-only websites to provide what they thought was accessibility. We believe that such practices should be discouraged because as I've just said, making standard websites is, accessible is readily achievable, and therefore having secondary text-only websites is not necessary. In addition, we found that organizations that try to maintain text-only accessible websites tend not to keep those websites current, and they end up being less accessible than standard websites.

Turning to the issue of captioning and audio description, CCB is very much in support of stronger standards to require theaters to provide live and motion picture audio description. Indeed, all of the efforts that have been done making theaters physically accessible are incomplete, especially for people who are blind and visually impaired and hearing-impaired, until such time as there are stronger standards for captioning and audio description.

Turning to the issue of updated 911 services, to the extent that enhanced 911 services include text and video components, they need to be developed in such a way that they are accessible to people who are blind and visually impaired. And just with one more sentence, regarding the issue of equipment and furniture, we believe strongly that standards need to be in place to allow -- to require that kiosks and point of sale terminals should be accessible. Our work in making ATM machines and point of sale terminals accessible here in California shows that these technologies are readily achievable.

Thank you.

>> JOHN WODATCH: Thank you very much, Mr. Welte. We appreciate your testimony today.

Next we are going to hear from Jo Anna Frugali. Ms. Frugali, please proceed. Thank you for sitting out for the day with us. We appreciate it.

>> JOANNA FRUGALI: No problem. Good afternoon, ladies and gentlemen of the panel. First of all I would like to thank you for coming to San Francisco. It's a rare opportunity for us to be face-to-face and speak to you. I also would like to commend you on your patience and perseverance today, through all the difficult, various environmental temperature changes, and the multiple topics. You have quite the job cut out for all of you, since you have heard so many, so much testimony not only from San Francisco but from the other sites you've been, that give you oftentimes conflicting advice, and conflicting instructions.

So, I would like to take the next couple of minutes to share some of my personal observations and experiences with you and try to tie everything together if I may.

My name is Jo Anna Frugali, and I'm the deputy director for programmatic access at the mayor's Office on Disability here in San Francisco. You have heard previously from Susan Mezner, our director, about all the great things the City of San Francisco is doing in terms of access. But I'd like to offer a little bit of my personal perspective. Being able to comment on the proposed updates on the ADA and the next generation of the ADA this past year is kind of significant.

I was not, I am not a naturally born American citizen. I grew up in Greece. And I first entered the United States barely a month after the ADA was first signed into law. I'm here before you today to comment on the new generation of ADA regulations.

As a person growing up in Greece, I was the first disabled person to go into mainstream school. I'd never had the opportunity to be included in any aspect of social life. So when I came here and there was such a thing as civil rights for people with disabilities, it was a strange phenomenon.

However, what I've begun to realize by spending several years and seeing and living and working in the United States and reaping the benefits of the ADA, I also realize that the ADA of 1990 opened the door and let us into the buildings. But really, didn't integrate us enough.

What is becoming so exciting with this new proposed regulations that you are considering is that we are taking the next step for saying that we don't just want entry into the door. We don't want for you to just let us in. We want to be included.

More specifically, I want to talk about furniture, non (inaudible) furniture and equipment, partly because in the first generation of the ADA, those were not covered. But as a person with a disability, I have had a very paradoxical relationship with the medical profession.

You would think that all of us, especially those of us who have grown with having a disability, we are very accepted in the medical world because we spend a big part of our lives there. But when you go to a doctor's office, and you have to be examined in the hallway because, or with the door open, because the room is not big enough to accommodate someone in a wheelchair; or as a mother, if you are taking your younger, as a mother in a wheelchair taking your younger child into an exam room for a shot and you are not able to be near them comfortably, because your wheelchair doesn't fit in.

But most importantly, trying to access medical care equipment, accessible exam tables, or even hospital tables -- hospital bedrooms. Several months, several years ago, I had an experience where I was in the hospital for an extended period of time, and during that time, I was never able to press the call button for a nurse, or to adjust the bed independently, because the buttons were so small, and so difficult to push. And there was no ancillary device to be able to do that when we know we have the infrared technology and all the other different methods of making things more accessible.

I would urge you to not focus on access. Access is not good enough. Access just gets us in the door. I would like you to think about universal design. You have heard about people who say that the bed heights in hotels are too high now. For some of us that works really well. For others, it doesn't. We need options. If the ADA promoted something, that was the issue of choice. And that is the spirit that you need to keep having. We need to look at more inclusive methods, and universal design, rather than just accessible design. Thank you very much for your time.

>> JOHN WODATCH: Thank you very much.

Now we come to, after a long and invigorating day, our last commenter. If you recall, the end of our morning session, our commenter's name was Carrie Finale. For those of you who speak French, this is also interesting, our last commenter today is Ms. Marilyn Finn. So you have the last word today.

>> MARILYN FINN: Yes, here I am. The last of the last. I want to thank all of you for all your hard work. I'm old enough that I was way before the ADA was passed, and I'm with the Hearing Loss Association of America. One of our founders, our primary founder, was on that committee that put together

the ADA. So I lived a lot of years without the ADA, and saw the tremendous difference it made afterwards.

I was on the staff of the Hearing Loss Association of America, and I'm a recent volunteer president of the Hearing Loss Association of California.

I've a profound hearing loss, and captioning is how I watch television, how I use the Internet, and what I must have to comprehend a film in the theater. I'm late-deafened. I wasn't hard of, my hearing loss wasn't noticed until I was 14. I think I'm as tired as everyone else.

And I was so pleased in my 30s when FM and infrared devices were put in the theaters, slowly, slowly but they came along. And I could go to the theater with my friends, coworkers, family. I could understand meetings with devices. That was wonderful. But about ten years ago, those devices would no longer work for me, not unless the person speaking was facing the camera, facing me, not unless I knew who was talking in a meeting room, and you could imagine that my idea of the plot of a movie was very strange, because I could only get, if someone was facing me. If they turned away, oops, I once had a fight with my mother and sister about what the plot of the movie actually was. Nobody won. (Chuckles).

So, HLA has chapters throughout the United States, and when I lived in Maryland and worked for HLAA, local members attended a captioned film once a month at 2 p.m. on a Sunday. We are all working and our other choice was 11 a.m. on a Tuesday, which we couldn't do. We saw whatever they chose to feature on that day and at that time, because there were no other captioned screenings. Blizzards did not deter us. When there was a family film featured, the excitement of the deaf and hard-of-hearing children there was just wonderful.

My brother lost his hearing as a baby, and he is here in one of these shirts, by the way. He went for the first 30 years of his life to movies with his friends and family but he didn't know what they were about. He just went because everybody was going.

For our family, captioning and movies is extremely important.

The captioning that we used in the theater in Maryland was open captioning. Rear window certainly allows you to go anywhere you want to go with your family, but I too experienced the thing of getting to a theater that advertised rear window, that I phoned ahead and said they had rear window and the staff didn't know how to turn it on.

It's a long drive sometimes to get to one of these theaters. So rear window is wonderful for what it does. Open captioning is wonderful for what it does. And the ADA is wonderful for what it does.

I wanted to touch on the computer captioning, because this is also part of my life. The Internet is becoming more and more a part of my life than all the outdoor things that I used to love to do so much.

I really think that what our -- the speaker, one or two people before me said about the ease of getting captioning on the Internet, getting assets on the Internet, I urge you to do that. And in conclusion, thank you very much, for this day. This was an amazing day to participate in.

>> JOHN WODATCH: Thank you very much.

I will, I have a few closing remarks. I agree with you. It has been an amazing day. It has been an invigorating day, for those of us from Washington, to come and hear your heart-felt stories. You were very kind with your implicit criticism. We appreciate that. But we also heard you, and I can tell you that we will go back to Washington, consider what you have said to us today, look forward to the written comments that you have.

I should point out to everyone here and those listening on the Internet that you have until January 24 to provide us with formal written comments.

We hope that you will do so. We hope you encourage your friends to do so. Our ability to craft careful, important and good regulations depends upon the comments that we will get from all of you.

I'd also like to thank a number of people who made today possible. We have had volunteers from a series of other federal agencies from the San Francisco area, from the Social Security Administration, from the EEOC, from the Department of Homeland Security, the Department of Agriculture, our own U.S. Attorney's Office and the Department of Justice, from the Department of Justice's Executive Office for Immigration Review, and from the Department of Education, particularly alumna of our own office, Laura Welp, who was here with us today and we appreciate her time.

I'd be remiss if I didn't thank the staff from the Department of Justice who were here, the person in charge of this hearing was Zita Johnson Betts who is acting deputy chief in the disability rights section, who's worked tirelessly on this hearing and the other hearings. She's been very ably assisted by two people who were sort of the co-chairs, Kay O'Brien and Brandy Wagstaff, you have seen these people working the event all day today.

In addition, there are other people from the department who have been working very hard. Linda Garrett, Robin Deykes and Barbara Elkin, who was our hearing clerk today. We had interpreters who came from Washington, Beth Maclay and Anita Frellich. We also would like to thank the interpreters who were supplemented the hearing today from San Francisco. In addition, other staff Rex Pace, Scott Shea and Samantha Lewis were all here, and working behind the scenes. And you saw some of the other people from our department who took turns listening to you today, up on the front, Mazen Basrawi who has been an iron man here sitting throughout the day.

>> MAZEN BASRAWI: I'd just like to point out it wasn't as much as you, John. (Chuckles).

>> JOHN WODATCH: And Bob Mather, Christina Galindo-Walsh, Felicia Sadler, who is sitting here now, Sarah DeCosse and Kathy Devine. We also had a number of contractors who assisted us, X-Factor who has been here at this hearing, and at the other two hearings that we did, who have done unbelievable work in terms of making this event run smoothly and get it up on the Internet. Audio Description Associates for the audio description, and Caption First for the CART services.

This event would not have been possible nor run anywhere near as smoothly without their combined efforts. I'm very thankful for them. We look forward to your comments in the future and I really thank especially those of you who stayed with us throughout the day and listened to all the testimony. I hope you found it as enriching as we did.

Thank you and with that, I'll conclude the hearing.

(Applause)

(end of hearing at 5:05 p.m. PT)

This text is being provided in a rough draft format. This transcript is provided in order to facilitate communication accessibility and may not be a totally verbatim record of the proceedings.

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Last updated: January 20, 2011

State of



Connecticut

By Her Excellency M. Jodi Rell, Governor: an

Official Statement

WHEREAS, people of all ages in Connecticut and throughout the world have developed the illness of Electromagnetic Sensitivity (EMS) as a result of global electromagnetic pollution; and

WHEREAS, Electromagnetic Sensitivity (EMS) is a painful chronic illness of hypersensitive reactions to electromagnetic radiations for which there is no known cure; and

WHEREAS, the symptoms of EMS include dermal changes, acute numbness and tingling, dermatitis, flushing, headaches, arrhythmia, muscular weakness, tinnitus, malaise, gastric problems, nausea, visual disturbances, severe neurological respiratory, speech problems, and numerous other physiological symptoms; and

WHEREAS, Electromagnetic Sensitivity (EMS) is recognized by the Americans with Disabilities Act, the U.S. Access Board, and numerous commissions; and

WHEREAS, the health of the general population is at risk from electromagnetic exposures that can lead to this illness induced by electromagnetic radiations; and

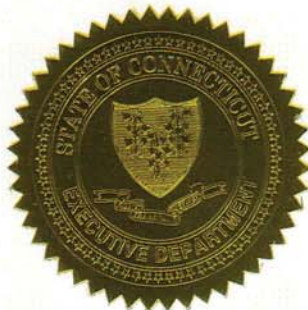
WHEREAS, this illness may be preventable through the reduction or avoidance of electromagnetic radiations, in both indoor and outdoor environments and by conducting further scientific research; and

WHEREAS, people with EMS need the support of the medical establishment and understanding of family, friends, co-workers, and society as they struggle with their illness and have to adapt to new lifestyles; now

THEREFORE, I, M. Jodi Rell, Governor of the State of Connecticut, do hereby proclaim the month of May 2009, as

ELECTROMAGNETIC SENSITIVITY (EMS) AWARENESS MONTH

in the State of Connecticut.



M. Jodi Rell
Governor

**Civil Rights Intervention for Electromagnetically Disabled
(C.R.I.E.D.)**

P.O. Box 3
Warner Springs, CA 92086

760-782-3005

April 12, 2011

Re: Protection of the Electromagnetically/Microwave Radiation Disabled
Americans

Dear FCC,

A large sector of citizens, estimated to be 3%, is disabled by electromagnetic fields and Radio Frequencies. The microwave radiation from wireless technology causes serious functional impairment to many whose symptoms have been characterized under the name radiofrequency sickness. The symptoms can range from discomfort to life-threatening depending on the exposure and the individual involved.ⁱ This disability has been recognized by the governments in other countries, such as Sweden, for some time now. To eliminate landlines will cut off millions of disabled Americans ability to communicate.

With the advent of increasing wireless technology being implemented throughout our country, an ever increasing number of our citizens are becoming hypersensitive to electromagnetic fields and radio frequencies. Citizens have to leave their homes and are unable to access public buildings, yet there are no provisions to accommodate these Americans or government protection for these Americans. Now the FCC want to eliminate one of the only methods for these disabled Americans to communicate. (see attachement Jan 2011 testimony to Department of Justice for expert opinion and citizen testimony)

I have referenced below several peer reviewed medical research, establishing that this is a real physically based illness that causes mild to severe disability to a growing number of Americans.ⁱⁱ

I urge the FCC to NOT eliminate landlines as a choice for many disabled Americans.

Thank you for your consideration of this important disability and civil rights issue facing our country.

Sincerely,

Barbara E. Schnier, Esquire
(Calif. Bar 113809, inactive disabled)

ⁱ Please see [“Provocation Study using Heart Rate Variability Shows Radiation from 2.4 GHz Cordless Phone Affects Autonomic Nervous System”](#) (Eur. J. Oncol. Library, vol. 5) (attached) to read about how potentially serious the effects can be on the heart. Also see the Bioinitiative (2007) found at www.bioinitiative.org for 2000 peer reviewed studies regarding physical effects of wireless tech on biological tissue.

ⁱⁱ ATTACHED AS EXHIBITS 1through 5:

1. PUBLIC HEALTH IMPLICATIONS OF WIRELESS TECHNOLOGIES
Cindy Sage , David O. Carpenter, (2009) *Institute for Health and the Environment, University at Albany, Rensselaer, NY, USA*
2. FIELDING A CURRENT IDEA: EXPLORING THE PUBLIC HEALTH IMPACT OF ELECTROMAGNETIC RADIATION (April 2007) Journal of the Royal Institute of Public Health, Faculty of Medicine, University of Alberta, author Stephen J. Genius
3. NON-THERMAL EFFECTS AND MECHANISMS OF INTERACTION BETWEEN ELECTROMAGNETIC FIELDS AND LIVING MATTER, (2010) Ramazzini Institute, European Journal of Oncology-Lib Vol.5 ; Edited by Livio Giuliani and Morando Soffritti.
4. EXPOSURE TO EXTREMELY LOW FREQUENCY ELECTROMAGNETIC FIELDS AND RADIOFREQUENCY RADIATION: CARDIOVASCULAR EFFECTS IN HUMANS: BioInfo Bank (number abstracts of medical articles; 26 pages)
5. LETTER TO CALIFORNIA PUBLIC UTILITIES COMMISSION, Daniel Harper M.D.

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Public Comments on Developing an Unified Inter-carrier Compensation: =====

Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Cheryl

Last Name: Meeker

Mailing Address: 1296 Haight St

City: San Francisco

Country: United States

State or Province: CA

Postal Code: 94117

Organization Name: null

We American citizens have already paid for telephone land lines and should not destroy them and should keep them maintained. Earthquake and other emergency preparedness is of utmost importance, and land lines allow citizens to have phone access in case of emergencies and during power outages.

Additionally, wireless technology has not been proved to be safe. In Europe, where the precautionary principle prevails, wireless technology is not allowed near schools. Please do not spend public or private money to increase wireless coverage-- this is using the citizenry as guinea pigs. Wireless technology is implicated in many illnesses, and epidemiological studies should be mounted and paid for by independent scientists -- studies should not be paid for by the Telecom Industry.

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Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Melodie

Last Name: Chrislock

Mailing Address: 26235 Atherton Place

City: Carmel

Country: United States

State or Province: CA

Postal Code: 93923

Organization Name: null

I want to keep my land line at and at a reasonable price!

Cell phones are not proven safe yet. I don't want forced exposure to constant cell phone use for myself or my children or young grandchildren. Europe has already banned the use of cell phones for children. If there so safe...why would they do that?

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Public Comments on Developing an Unified Intercarrier Compensation: =====

Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: David E.

Last Name: Smith

Mailing Address: 8388 Garden Home Trail

City: Snowflake

Country: United States

State or Province: AZ

Postal Code: 85937

Organization Name: N/A

Dear Commissioners:

I am totally opposed to the proposed elimination of the land line telephone infrastructure and its replacement with a wireless infrastructure. Citizens have the right to have a choice to keep our land line phones. Land lines are safe, highly reliable and free from adverse health effects. They also provide greater safety in emergencies: when the power goes out you can't charge your cell phone but your land line phones still work.

People with medical implants like my dad can't use cell phones. Dad served as an officer in WWII and deserves to keep his land line. How dare you try to take away an ex-officer's phone service!

Land lines are absolutely essential and must not be eliminated.

Sincerely,
David E. Smith

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Public Comments on Developing an Unified Inter-carrier Compensation: =====

Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Bill P.

Last Name: Curry

Mailing Address: 22W101 McCarron Road,

City: Glen Ellyn, Illinois

Country: United States

State or Province: IL

Postal Code: 60137

Organization Name: self

I am appalled to see that the FCC is considering abolishing land line telephone service in favor of wireless services. Many people do not use wireless services. Published studies in in scientific journals (e.g., Schrotner, et al in "Environmental Health Perspectives," 2003) have shown that at least 2% of the general population are electromagnetically hypersensitive and are adversely affected when they are subjected to even low doses of pulsed RF radiation. The telephone companies benefit financially by the elimination of land lines, but the general public will suffer inconvenience and some will also suffer physically if this poorly considered requirement is imposed on a helpless public.

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Submitter Info:

First Name: Ingrid

Last Name: Fogelgren

Mailing Address: 340 Elmcroft Blvd Apt# 4306

City: Rockville

Country: United States

State or Province: MD

Postal Code: 20850

Organization Name: null

I would like to ask that you do not eliminate funding for landlines or permit landlines to be eliminated. There are millions of individuals suffering from EMF, and disabling symptoms that result from the use of cell phones and WiFi, and thus cannot use cell phones or a computer. I am one of those individuals.

I have CFIDS/MCS and am bedridden/housebound most of the time due to my chronic illness. I cannot use a cell phone because I get a debilitating headache just from being within one to two yards of a cell phone that is turned on, nor can I use WiFi or stay within an area where there is WiFi for any length of time. I not only get a debilitating headache that is undescrivable, I get very nauseous and sick feeling. My symptoms linger for hours after having been exposed, and leaves me basically unable to function.

Due to being chronically ill and therefore mostly bedridden and housebound, I rely heavily on my landline telephone. My landline telephone is essential for me to have contact with the outside World. I need my landline in order to reach emergency services, such as the police, fire department and ambulance services. I am also dependent upon my landline in order to call doctors, places of business, to pay my bills by phone, and to maintain contact with family and friends.

Those of us living with disabilities, and those of us who cannot use a cell phone, or a computer for any extended period of time, if at all, are highly dependent on landlines, especially since we are often too sick to go anywhere. It is our lifeline. Please do not render us even more disabled by eliminating our lifeline to the rest of the World. Having access to a landline phone can be a matter of life and death for many of us whom are so ill that we cannot leave our home and must be able to contact emergency services, and maintain some dignity by having the ability to maintain social contacts and conduct business from home via a landline. Please maintain landlines for those in need.

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Submitter Info:

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State or Province: NY

Postal Code: 10040-3727

Organization Name: Consumers Health Freedom Coalition

Gentlepersons:

The FCC is hastily abandoning the switched telephone network on the faulty assumption that the advent of cellular or wireless telephone service is universally useable and accessible.

The Americans with Disabilities Act is administered by the Architectural and Transportation Barriers Compliance Board(the Access Board). The Access Board estimates that 3% of the US population is electrically sensitive. This amounts to about 10 million people. The boards website containing this is

<http://www.access-board.gov/research/ieq/intro/cfm>

Many of these people cannot use cellular telephones and have difficulty using computers. They cannot be ignored.

I am one of the people who is very disturbed by the constant stream of serious medical and scientific studies coming out that cast serious doubt on the long term safety of cellular and wireless technologies. Many European countries and Israel are more observant of the precautionary principle in setting public policy standards for this technology.

Many countries make it illegal to sell wireless phones to children. The overwhelming evidence is that the developing brain and neurological system is much too susceptible to this exposure. When this population is added the electrically sensitive it is far too substantial to be ignored.

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Submitter Info:

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Country: United States

State or Province: IA

Postal Code: 52556

Organization Name: null

I protest the proposed expansion of zones of wireless radiation expansion. As a person who has become hyper sensitive to pollution and radiation I protest the expansion of radiation to rural areas. I am moving to rural West Virginia soon. Individuals who are extremely sensitive to electromagnetic radiation need someplace they can go to get away from this insidious and every expanding influence.

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Submitter Info:

First Name: Deborah

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Country: United States

State or Province: FL

Postal Code: 33647

Organization Name: null

Please ensure that land line telephone connections are available to those of us who do not wish to use wireless telephones. Exposure to wireless radiation has been demonstrated to cause health problems in many recent studies.

<http://emf.mercola.com/sites/emf/archive/2011/01/19/the-hard-core-science-of-how-cell-phones-and-other-emf-damages-you.aspx>

<http://www.magdahavas.com/>

http://www.gigahertz.ch/media/PDF_1/Flyer-2.pdf

Landlines are safe.

Children, people with medical implants, people with Radiofrequency Sickness, and people who don't want to increase their risk of cancer can use only landlines.

Research on radiofrequency radiation exposure indicates increased cancer incidence, altered blood glucose levels, weakened blood-brain barrier.

Many in the public cannot use any cordless or wireless phone without developing headaches that are often severe.

Landlines are secure. Cabled phones ensure privacy.

Landlines are reliable.

During power outages and natural disasters, landlines are dependable.

Landlines are affordable.

We already have the infrastructure for landlines.

Mobile phones fees are unregulated.

Mobile phones and computers need constant repair, upgrades and replacement. Seniors and low-income citizens can't afford this. Equipment for landlines is durable and economical.

Landlines are easy to use.

Imagine people with Alzheimers or other dementia trying to learn how to initiate computer calls.

Landlines are Green.

As a nation, we must reduce our use of power and greenhouse gas emissions. Corded landlines require minimal electricity compared with antennas that emit radiation

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continuously. Cellphones require recharging. This is not the time to buy new devices or install new infrastructure that demands more electricity production.

*** The FCC has the duty to facilitate communications for all citizens.

I will not use a wireless phone and children should never be given a wireless phone.
What will they do?

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Submitter Info:

First Name: Kraig

Last Name: Klunness

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City: Houghton

Country: United States

State or Province: MI

Postal Code: 49931

Organization Name: null

Regarding proposed changes to the Universal Service Fund:

1) I oppose any rerouting of these funds away from supporting the analog circuit-switched telephone network. Analog landline telephones are the only phones I am able to use due to my problems with electrical sensitivity. My ability to use a computer is also extremely limited, so I rely heavily on my landline for both personal and business communications. Electrical sensitivity is a problem I share with many other Americans who would be denied telephone access if the existing analog system is replaced with digitized broadband.

2) Since there is a growing body of medical research indicating potential health problems with wireless technologies, I advocate that additional fees be attached to wireless services, the proceeds of which would support maintaining an affordable analog switched landline phone network. In this way, public policy would favor public health by supporting the least polluting communications system in terms of electrosmog, and would remain consistent with the logic of "polluter pays."

3) Any public funds provided for broadband development should go only toward fiber-optic cable infrastructure, not wireless. Fiber-optic cable is superior for public health, national security, and technical reasons and is a much better investment of tax dollars than wireless.

Defunding or dismantling the analog circuit-switched phone network would be a mistake. I urge you not to allow this. Thank you.

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Submitter Info:

First Name: Faye

Last Name: Deckter

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State or Province: PA

Postal Code: 19148

Organization Name: Historic City Gardens

I represent several hundred people.

Please DO NOT eliminate phone landlines. This is a safer technology. We should have the right to choose a safer technology. Many people are electromagnetic sensitive and cell phones make them sick. You should not take away their right to have a choice and have a landline.

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Submitter Info:

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Country: United States

State or Province: IL

Postal Code: 60540

Organization Name: null

I am dependent on my landlines for fax and voice. I am electrohypersensitive and have to avoid cellphones or other forms of communication devices. Even internet can be disabling to me. Also I do radio show interviews on a regular basis and depend on the reliability of the landline. Others I know have Comcast or other cable phone lines and are constantly having trouble with the quality of the reception--and their phones are out-of-service often. I cannot afford to have that happen to me. Because of my electrohypersensitivity, I cannot use another person's cellphone in an emergency making landlines more important than ever. It gives me comfort to know where phones are located and not where a cellphone might or might not be if I need help. And, will the battery be working. For the sake of all concerned and especially the electrohypersensitive individuals, keep and maintain landlines for us and future generations.

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Submitter Info:

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State or Province: TX

Postal Code: 75220-3757

Organization Name: Chemical Sensitivity Disorders Association

I have known I was sensitive to electrical activity since 1978 when my attention greatly improved by putting my television inside a steel screen-wired Faraday cage. In the early 1990's, I found that I would lose my attention after using a radio-telephone. In 1996 I found I could not use a computer without using a liquid crystal display monitor, and keeping the processor of the computer 15 feet away from my work station. I suffered attention deficits when using cell phones. My attention would be impaired if I had to use a cell phone. The switched telephone network must be maintained. The Architectural and Transportation Barriers Compliance Board ("the Access Board"), is the federal agency that administers the Americans with Disabilities Act. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities (www.access-board.gov/research/ieq/intro.cfm). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

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Submitter Info:

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Postal Code: 87506-9471

Organization Name: null

Please do not eliminate switched telephone networks because they are essential to the 10 million Americans with electromagnetic sensitivities and because wireless systems affect peoples' health.

According to the Architectural and Transportation Barriers Compliance Board, an estimated 3% of the population (10 million people) have electromagnetic sensitivities (<http://www.access-board.gov/research/ieq/intro.cfm>). They cannot use wireless technology and have difficulty using computers. For them a switched telephone network is essential for voice service.

Medical research shows that wireless systems adversely affect humans. Three articles in respected medical journals show that cell phone use degrades men's sperm. Physicians at the Cleveland Clinic showed that the quality of semen in men degrades with less than 2 hours per day of cell use, (1) and that after 1 hour of exposure to cell phone radiation, the health of sperm in a test tube also degrades. (2) Researchers at the Australian Research Council detected DNA damage to sperm in a test tube after exposure to cell phone radiation. (3)

These results demonstrate that cell phones affect our bodies and makes me ask if there are other detrimental effects on men or women that are more difficult to detect. Also, how do cell phones affect our children's health and their reproductive capabilities?

Two physicians found that people living in an area with a cell tower are four times more likely to get cancer than those who live in a similar area without a cell tower. (4) They compared cancer rates in two similar, neighboring villages before and after a cell tower was installed in one village.

Research that disputes these effects are typically funded by the telecom companies. (5)

Your support of switched telephone networks will aid people disabled by wireless exposure and preserve the health of all Americans.

References attached.

Source of Funding and Results of Studies of Health Effects of Mobile Phone Use: Systematic Review of Experimental Studies

Anke Huss,¹ Matthias Egger,^{1,2} Kerstin Hug,³ Karin Huwiler-Müntener,¹ and Martin Röösli¹

¹Department of Social and Preventive Medicine, University of Berne, Berne, Switzerland; ²Department of Social Medicine, University of Bristol, United Kingdom; ³Institute of Social and Preventive Medicine, University of Basle, Basle, Switzerland

OBJECTIVES: There is concern regarding the possible health effects of cellular telephone use. We examined whether the source of funding of studies of the effects of low-level radiofrequency radiation is associated with the results of studies. We conducted a systematic review of studies of controlled exposure to radiofrequency radiation with health-related outcomes (electroencephalogram, cognitive or cardiovascular function, hormone levels, symptoms, and subjective well-being).

DATA SOURCES: We searched EMBASE, Medline, and a specialist database in February 2005 and scrutinized reference lists from relevant publications.

DATA EXTRACTION: Data on the source of funding, study design, methodologic quality, and other study characteristics were extracted. The primary outcome was the reporting of at least one statistically significant association between the exposure and a health-related outcome. Data were analyzed using logistic regression models.

DATA SYNTHESIS: Of 59 studies, 12 (20%) were funded exclusively by the telecommunications industry, 11 (19%) were funded by public agencies or charities, 14 (24%) had mixed funding (including industry), and in 22 (37%) the source of funding was not reported. Studies funded exclusively by industry reported the largest number of outcomes, but were least likely to report a statistically significant result: The odds ratio was 0.11 (95% confidence interval, 0.02–0.78), compared with studies funded by public agencies or charities. This finding was not materially altered in analyses adjusted for the number of outcomes reported, study quality, and other factors.

CONCLUSIONS: The interpretation of results from studies of health effects of radiofrequency radiation should take sponsorship into account.

KEY WORDS: electromagnetic fields, financial conflicts of interest, human laboratory studies, mobile phones. *Environ Health Perspect* 115:1–4 (2007). doi:10.1289/ehp.9149 available via <http://dx.doi.org/> [Online 15 September 2006]

The use of mobile telephones has increased rapidly in recent years. The emission of low-level radiofrequency electromagnetic fields leading to the absorption of radiation by the brain in users of handheld mobile phones has raised concerns regarding potential effects on health (Rothman 2000). However, the studies examining this issue have produced conflicting results, and there is ongoing debate on this issue (Ahlbom et al. 2004; Feychting et al. 2005). Many of the relevant studies have been funded by the telecommunications industry, and thus may have resulted in conflicts of interest (Thompson 1993). Recent systematic reviews of the influence of financial interests in medical research concluded that there is a strong association between industry sponsorship and pro-industry conclusions (Bekelman et al. 2003; Yaphe et al. 2001). This association has not been examined in the context of the studies of potential adverse effects of mobile phone use. We performed a systematic review and analysis of the literature to examine whether industry involvement is associated with the results and methodologic quality of studies.

Methods

We searched EMBASE (<http://www.embase.com>) and Medline (<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?DB=pubmed>) in

February 2005. Key and free text words included “cell(ular),” “mobile,” “(tele)phone(s)” in connection with “attention,” “auditory,” “bioelectric,” “brain physiology,” “cardiovascular,” “cerebral,” “circulatory,” “cognitive,” “EEG,” “health complaint(s),” “hearing,” “heart rate,” “hormone(s),” “learning,” “melatonin,” “memory,” “neural,” “neurological,” “nervous system,” “reaction,” “visual,” “symptom(s),” or “well-being.” The search was complemented with references from a specialist database (ELMAR 2005) and by scrutinizing reference lists from the relevant publications. Articles published in English, German, or French were considered.

We included original articles that reported studies of the effect of controlled exposure with radiofrequency radiation on health-related outcomes [“human laboratory studies” in World Health Organization (WHO) terminology (Repacholi 1998)]. Health-related outcomes included electroencephalogram (EEG) recordings, assessments of cognitive or cardiovascular function, hormone levels, and subjective well-being and symptoms. We excluded studies of the risk of using mobile phones when driving a motor vehicle or operating machinery as well as studies on electromagnetic field (EMF) incompatibilities (e.g., pacemakers or hearing aids). Three of us (A.H., K.H., M.R.) independently extracted

data on the source of funding (industry, public or charity, mixed, not reported) and potential confounding factors, including study design (crossover, parallel, other), exposure (frequency band, duration, field intensity, and location of antenna), and methodologic and reporting quality. Four dimensions of quality were assessed (Jüni et al. 2001; Repacholi 1998): *a*) randomized, concealed allocation of study participants in parallel or crossover trials; *b*) blinding of participants and investigators to allocation group; *c*) reporting of the specific absorption rate (SAR; watts per kilogram tissue) from direct measurement using a phantom head or three-dimensional dosimetric calculations (“appropriate exposure setting”); *d*) appropriate statistical analysis. For each item, studies were classified as adequate or inadequate/unclear.

The primary outcome was the reporting of at least one statistically significant ($p < 0.05$) association between radiofrequency exposure and a health-related outcome. The message in the title was also assessed. We distinguished among neutral titles [e.g., “Human brain activity during exposure to radiofrequency fields emitted by cellular phones” (Hietanen et al. 2000)], titles indicating an effect of radiation [e.g., “Exposure to pulsed high-frequency electromagnetic field during waking affects human sleep EEG” (Huber et al. 2000)], and titles stating that no effect was shown [e.g., “No effect on cognitive function from daily mobile phone use” (Beset et al. 2005)]. Finally, authors’ declaration of conflicts of interest (present, absent) and affiliations (industry, other) were recorded. Differences in data extracted by A.H., K.H., and M.R. were resolved in the group, with the senior epidemiologist (M.R.) acting as the arbiter. In addition, two of us (K.H.M., M.E.), who were kept blind to funding

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Supplemental Material is available online at <http://www.ehponline.org/members/2006/9149/supplemental.pdf>

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The authors declare they have no competing financial interests.

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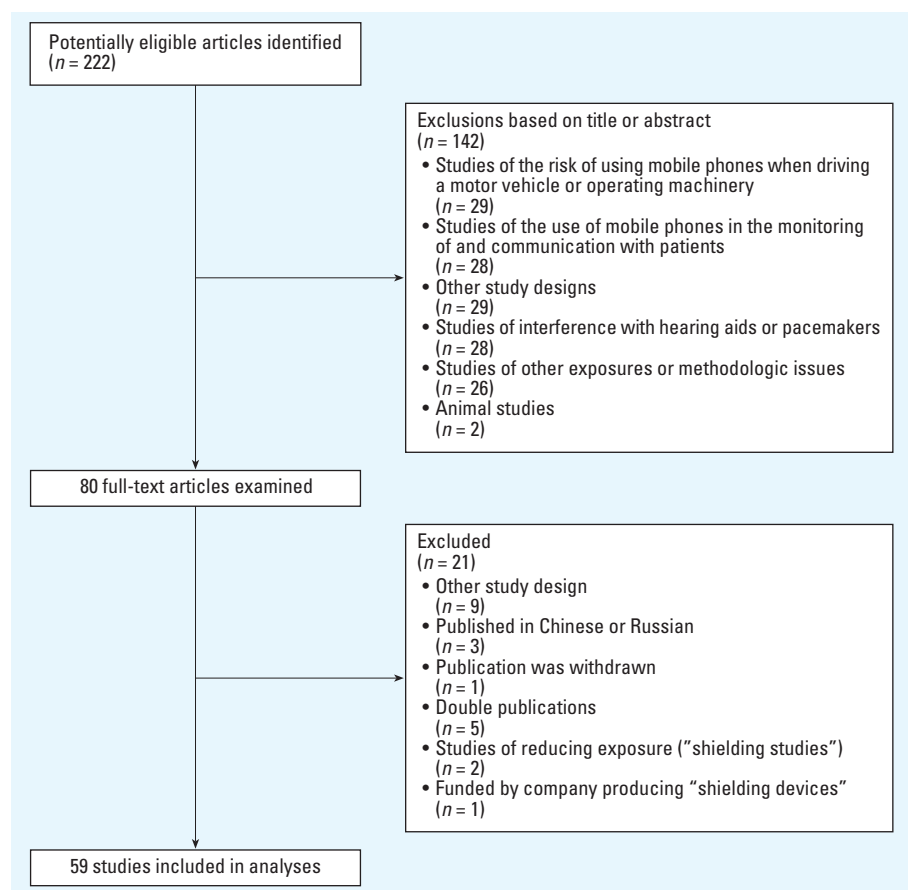


Figure 1. Identification of eligible studies.

Table 1. Characteristics of 59 experimental studies of the effects of exposure to low-level radiofrequency electromagnetic fields.

Study characteristic	Source of funding			
	Industry (n = 12)	Public or charity (n = 11)	Mixed (n = 14)	Not reported (n = 22)
Study design [no. (%)]				
Crossover trial	10 (83.3)	7 (63.6)	12 (85.7)	11 (50)
Parallel group trial	0 (0)	2 (18.2)	1 (7.1)	2 (9.1)
Other, unclear	2 (16.7)	2 (18.2)	1 (7.1)	9 (40.9)
Exposure [no. (%)]				
Location of antenna				
Next to ear	4 (33.3)	8 (72.7)	11 (78.6)	14 (63.6)
Other/unclear	8 (66.7)	3 (27.3)	3 (21.4)	8 (36.4)
Frequency band^a				
900 MHz	11 (91.7)	8 (72.7)	13 (92.9)	14 (63.6)
Other frequencies	2 (16.7)	7 (63.6)	0 (0)	5 (22.7)
Unclear	0 (0)	0 (0)	1 (7.1)	5 (22.7)
Median duration of exposure (range)	180 (3–480)	20 (5–35)	45 (30–240)	30 (4–480)
Outcomes assessed [no. (%)]^a				
Electroencephalogram	7 (58.3)	5 (45.5)	8 (57.1)	12 (54.5)
Cognitive function tests	0 (0)	3 (27.3)	8 (57.1)	8 (36.4)
Hormone levels	5 (41.7)	0 (0)	0 (0)	2 (9.1)
Cardiovascular function	2 (16.7)	1 (9.1)	0 (0)	2 (9.1)
Well-being or symptoms	1 (8.3)	1 (9.1)	1 (7.1)	0 (0)
Other	4 (33.3)	3 (27.3)	1 (7.1)	3 (13.6)
Study quality [no. (%)]^a				
Randomization adequate	10 (83.3)	7 (63.6)	13 (92.9)	9 (40.9)
Participants and assessors blinded	1 (8.3)	3 (27.3)	8 (57.1)	3 (13.6)
SAR determined	4 (33.3)	4 (36.4)	8 (57.1)	2 (9.1)
Statistical analysis adequate	3 (25)	3 (27.3)	7 (50)	1 (4.5)
Median study size (range)	21 (8–38)	24 (13–100)	20 (13–96)	20 (8–78)

Percentages are column percentages.

^aThe same study could be listed in more than one category.

source, authors, and institutions, repeated extraction of data from abstracts and assessments of titles. Differences in data extracted by K.H.M. and M.E. were resolved with the senior epidemiologist (M.E.) acting as the arbiter. Based on the abstracts, we assessed whether authors interpreted their study results as showing an effect of low-level radiofrequency radiation, as showing no effect, or as indicating an unclear finding.

We used logistic regression models to assess whether the source of funding was associated with the reporting of at least one significant effect in the article (including the abstract). We examined the influence of potential confounders, such as the total number of outcomes that were reported in the article, the type of study (crossover, parallel, other), the four dimensions of study quality (adequate or not adequate/unclear), exposure conditions (position of the antenna next to the ear compared with other locations; use of the 900-MHz band compared with other bands; duration of exposure in minutes), as well as the type of outcome (e.g., cognitive function tests: yes vs. no). Variables were entered one at a time and, given the limited number of studies, models were adjusted for one variable only. Results are reported as odds ratios (ORs) with 95% confidence intervals (CIs). All analyses were carried out in Stata (version 8.2; StataCorp., College Station, TX, USA).

Results

We identified 222 potentially relevant publications and excluded 163 studies that did not meet inclusion criteria (Figure 1). We excluded one study that had been funded by a company producing "shielding" devices that reduce EMF exposure (Croft et al. 2002). A total of 59 studies were included: 12 (20%) were exclusively funded by the telecommunications industry, 11 (19%) were funded by public agencies or charities, 14 (24%) had mixed funding (including industry and industry-independent sources), and in 22 (37%) studies the source of funding was not reported. None of 31 journals published a statement on possible conflicts of interest of the 287 authors listed in the bylines. Five (8%) studies had authors with industry affiliation. All studies except two (3%) were published in journals that use peer review, and one was published in a journal supplement. The bibliographic references are given in the Supplemental Material (<http://www.ehponline.org/members/2006/9149/supplemental.pdf>).

Blinded and open extraction of data yielded identical results with respect to the reporting of statistically significant effects in the abstract and the message of the title. Study characteristics are shown in Table 1. All studies were published during 1995–2005, with the number of publications increasing from one to

two publications per year to 11 publications in 2004. Median year of publication was 1998 for industry-funded studies, 2002 for public or charity funding and studies with mixed funding sources, and 2003 for studies that did not report their funding source. The median size of all the studies was small (20 study participants); most studies ($n = 32$, 54%) were of a crossover design and mimicked the exposure situation during a phone call, using the 900-MHz band with the antenna located close to the ear. Exposure duration ranged from 3 to 480 min, with a median of 33 minutes. Thirty-three (59%) studies measured outcomes during exposure, 14 (24%) postexposure, and 12 (20%) at both times. Thirty-nine (66%) studies prevented selection bias with adequate randomization; 15 (25%) blinded both participants and assessors; in 18 (31%) the field intensity had been assessed appropriately, with SAR values ranging from 0.03 to 2 W/kg tissue. Finally, in 14 (24%) studies we considered the statistical analysis to be adequate. Study quality varied by source of funding: Studies with mixed funding (including public agencies or charities and industry) had the highest quality, whereas studies with no reported source of funding did worst (Table 1).

Forty (68%) studies reported one or more statistically significant results ($p < 0.05$) indicating an effect of the exposure (Table 2). Studies funded exclusively by industry reported on the largest number of outcomes but were less likely to report statistically significant results: The OR for reporting at least one such result was 0.11 (95% CI, 0.02–0.78), compared with studies funded by public agencies or charities (Table 3). This finding was not materially altered in analyses adjusted for the number of outcomes reported, study design and quality, exposure characteristics, or outcomes [Table 3; see Supplemental Material, Table 1 (<http://www.ehponline.org/members/2006/9149/supplemental.pdf>)]. Similar results were obtained when restricting analyses to results reported in abstracts (OR = 0.29; 95% CI, 0.05–1.59) or on the conclusions in the abstract (OR = 0.10, 95% CI, 0.009–1.10). Thirty-seven (63%) studies had a neutral title, 11 (19%) a title reporting an effect, and 11 (19%) a title reporting no effect (Table 2).

Discussion

We examined the methodologic quality and results of experimental studies investigating the effects of the type of radiofrequency radiation emitted by handheld cellular telephones. We hypothesized that studies would be less likely to show an effect of the exposure if funded by the telecommunications industry, which has a vested interest in portraying the use of mobile phones as safe. We found that the studies funded exclusively by industry

were indeed substantially less likely to report statistically significant effects on a range of end points that may be relevant to health.

Our findings add to the existing evidence that single-source sponsorship is associated with outcomes that favor the sponsors' products (Bekelman et al. 2003; Davidson 1986; Lexchin et al. 2003; Stelfox et al. 1998). Most previous studies of this issue were based on studies of the efficacy and cost-effectiveness of drug treatments. A recent systematic review and meta-analysis showed that studies sponsored by the pharmaceutical industry were approximately four times more likely to have outcomes favoring the sponsor's drug than studies with other sources of funding (Lexchin et al. 2003). The influence of the tobacco industry on the research it funded has also been investigated (Barnes and Bero 1996, 1998; Bero 2005). To our knowledge, this is the first study to examine this issue in the context of exposure to radiofrequency electromagnetic fields.

Our study has several limitations. We restricted our analysis to human laboratory studies. This resulted in a more homogenous set of studies, but may have reduced the statistical power to demonstrate or exclude smaller associations. The WHO has identified the need for further studies of this type to clarify the effects of radiofrequency exposure on neuroendocrine, neurologic, and immune systems (Foster and Repacholi 2004). We considered including epidemiologic studies but found that practically all of them were publicly funded. The study's primary outcome—the reporting of statistically significant associations—is a crude measure that ignores the size of reported effects. However, we found the same trends when assessing the authors' conclusions in the abstracts.

Although we have shown an association between sponsorship and results, it remains unclear which type of funding leads to the most accurate estimates of the effects of

Table 2. Results from assessments of article text, abstract, and title of 59 experimental studies of the effects of exposure to low-level radiofrequency electromagnetic fields.

	Source of funding			
	Industry ($n = 12$)	Public or charity ($n = 11$)	Mixed ($n = 14$)	Not reported ($n = 22$)
Article text				
No. (%) of studies with at least one result suggesting an effect at $p < 0.05$	4 (33)	9 (82)	10 (71)	17 (77)
Median no. (range) of outcomes reported	17.5 (4–31)	10 (1–80)	16 (9–44)	7 (1–35)
Median no. (range) of outcomes suggesting an effect at $p < 0.05$	0 (0–6)	1.5 (0–7)	3 (0–15)	1.5 (0–12)
Abstract^a				
No. (%) of studies with at least one result suggesting a significant effect	4 (33)	7 (64)	10 (71)	15 (75)
Median no. (range) of outcomes reported	3.5 (1–36)	3 (1–5)	6.5 (3–44)	3 (1–64)
Median no. (range) of outcomes suggesting a significant effect	0 (0–6)	1 (0–3)	2 (0–5)	1.5 (0–7)
Authors' interpretation of results [no. (%)]				
No effect of radiofrequency radiation	10 (83.3)	5 (45.5)	4 (28.6)	5 (22.7)
Effect of radiofrequency radiation	1 (8.3)	5 (45.5)	8 (57.1)	14 (63.6)
Unclear finding	1 (8.3)	1 (9)	2 (14.3)	3 (13.6)
Title [no. (%)]				
Neutral	7 (58)	5 (46)	8 (57)	17 (77)
Statement of effect	0 (0)	4 (36)	3 (21)	4 (18)
Statement of no effect	5 (42)	2 (18)	3 (21)	1 (5)

Percentages are column percentages.

^aTwo publications that did not report their source of funding had no abstracts.

Table 3. Probability of reporting at least one statistically significant result ($p < 0.05$) according to source of funding: crude and adjusted ORs (95% CIs) from logistic regression models.

	Source of funding				p -Value ^a
	Industry ($n = 12$)	Public or charity ($n = 11$)	Mixed ($n = 14$)	Not reported ($n = 22$)	
Crude	0.11 (0.02–0.78)	1 (reference)	0.56 (0.08–3.80)	0.76 (0.12–4.70)	0.04
Adjusted for					
No. of reported outcomes	0.12 (0.02–0.89)	1 (reference)	0.60 (0.08–4.28)	0.96 (0.15–6.23)	0.04
Median study size	0.08 (0.009–0.62)	1 (reference)	0.61 (0.08–4.59)	0.57 (0.08–4.02)	0.02
Study design (crossover, parallel, or other)	0.08 (0.01–0.68)	1 (reference)	0.38 (0.05–3.07)	1.16 (0.16–8.61)	0.029
Study quality					
Randomization adequate	0.04 (0–0.56)	1 (reference)	0.16 (0.01–2.15)	1.27 (0.16–9.89)	0.005
Participants and assessors blinded	0.14 (0.02–0.96)	1 (reference)	0.54 (0.08–3.91)	0.76 (0.12–4.8)	0.09
Statistical analysis adequate	0.12 (0.02–0.85)	1 (reference)	0.67 (0.09–4.85)	0.54 (0.08–3.76)	0.07
Exposure setting appropriate	0.13 (0.02–0.89)	1 (reference)	0.47 (0.07–3.39)	0.86 (0.14–5.5)	0.06

Models adjusted for one variable at a time.

^aFrom likelihood ratio tests.

radiofrequency radiation. For example, if researchers with an environmentalist agenda are more likely to be funded by public agencies or charities, then their bias may result in an overestimation of effects. Interestingly, studies with mixed funding were of the highest quality. The National Radiological Protection Board (NRPB 2004) reviewed studies of health effects from radiofrequency (RF) fields and concluded that "scientific evidence regarding effects of RF field exposure from mobile phones on human brain activity and cognitive function ... has included results both supporting and against the hypothesis of an effect." We found that the source of funding explains some of the heterogeneity in the results from different studies. The association was robust and little affected by potential confounding factors such as sample size, study design, or quality.

Possible explanations for the association between source of funding and results have been discussed in the context of clinical research sponsored by the pharmaceutical industry (Baker et al. 2003; Bekelman et al. 2003; Lexchin et al. 2003). The association could reflect the selective publication of studies that produced results that fitted the sponsor's agenda. Sponsors might influence the design of the study, the nature of the exposure, and the type of outcomes assessed. In multivariate logistic regression analysis, the only factor that strongly predicted the reporting of statistically significant effects was whether or not the study was funded exclusively by industry. We stress that our ability to control for potential confounding factors may have been hampered by the incomplete reporting of relevant study characteristics.

Medical and science journals are implementing policies that require authors to disclose their financial and other conflicts of interest. None of the articles examined here

included such a statement, in line with a survey of science and medical journals that showed that adopting such policies does not generally lead to the publication of disclosure statements (Krimsky and Rothenberg 2001). A review of 2005 instructions to authors showed that 15 (48%) of the 31 journals included in our study had conflict of interest policies. Our results support the notion that disclosure statements should be published, including statements indicating the absence of conflicts of interest. The role of the funding source in the design, conduct, analysis, and reporting of the study should also be addressed.

There is widespread concern regarding the possible health effects associated with the use of cellular phones, mobile telephone base stations, or broadcasting transmitters. Most (68%) of the studies assessed here reported biologic effects. At present it is unclear whether these biologic effects translate into relevant health hazards. Reports from national and international bodies have recently concluded that further research efforts are needed, and dedicated research programs have been set up in the United States, Germany, Denmark, Hungary, Switzerland, and Japan. Our study indicates that the interpretation of the results from existing and future studies of the health effects of radiofrequency radiation should take sponsorship into account.

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***INCREASED INCIDENCE OF CANCER NEAR A CELL-
PHONE TRANSMITTER STATION.***

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**Increased Incidence of Cancer near a Cell-Phone Transmitter Station
by Ronni Wolf and Danny Wolf**

Abstract

Significant concern has been raised about possible health effects from exposure to radiofrequency (RF) electromagnetic fields, especially after the rapid introduction of mobile telecommunications systems. Parents are especially concerned with the possibility that children might develop cancer after exposure to the RF emissions from mobile telephone base stations erected in or near schools. The few epidemiologic studies that did report on cancer incidence in relation to RF radiation have generally presented negative or inconsistent results, and thus emphasize the need for more studies that should investigate cohorts with high RF exposure for changes in cancer incidence. The aim of this study is to investigate whether there is an increased cancer incidence in populations, living in a small area, and exposed to RF radiation from a cell-phone transmitter station.

This is an epidemiologic assessment, to determine whether the incidence of cancer cases among individuals exposed to a cell-phone transmitter station is different from that expected in Israel, in Netanya, or as compared to people who lived in a nearby area. Participants are people (n=622) living in the area near a cell-phone transmitter station for 3-7 years who were patients of one health clinic (of DW). The exposure began 1 year before the start of the study when the station first came into service. A second cohort of individuals (n=1222) who get their medical services in a clinic located nearby with very closely matched, environment, workplace and occupational characteristics was used for comparison.

In the area of exposure (area A) eight cases of different kinds of cancer were diagnosed in a period of only one year. This rate of cancers was compared both with the rate of 31 cases per 10,000 per year in the general population and the 2/1222 rate recorded in the nearby clinic (area B). Relative cancer rates for females were 10.5 for area A, 0.6 for area B and 1 for the whole town of Netanya. Cancer incidence of women in area A was thus significantly higher ($p < 0.0001$) compared with that of area B and the whole city. A comparison of the relative risk revealed that there were 4.15 times more cases in area A than in the entire population.

The study indicates an association between increased incidence of cancer and living in proximity to a cell-phone transmitter station.

Key Words:

Radiofrequency radiation; Cell-phone transmitter station (cell-phone antenna); Cancer incidence study; Netanya.

Introduction

Much concern has been expressed about possible health effects from exposure to radiofrequency (RF) electromagnetic fields, particularly following publication of scientific reports suggesting that residence near high voltage power lines may be associated with an increased risk of developing childhood leukemia. While interest tended to focus on microwave ovens and radar equipment in the past, it is now mobile telecommunication that attracts the most attention. The rapid introduction of mobile telecommunications systems, the exponential increase in the use of such phones, and the many base stations needed for serving them have engendered renewed concerns about exposure to RF radiation.

The biological effects of low level electromagnetic fields and a possible potential relation to cancer causation are controversial. There have been several epidemiological studies of the possible adverse health effects associated with environmental exposure to extremely low frequency (0-300 Hz) non-ionizing radiation, such as that emitted by power cables and electric substations, linking such exposure to leukemia, brain cancer, male breast cancer and skin and eye melanoma (1-11).

Far less attention has been paid to health hazards from environmental exposure to radiation in the RF range (100 kHz to 300 GHz), including the radiation emitted from cell-phone equipment, in the frequencies of 850 MHz, at field strengths much below those required to produce thermal effects. The few epidemiologic studies that did report on cancer incidence in relation to RF radiation (mainly from occupational exposure including microwave and radar and from living in proximity to TV towers) have generally presented negative or inconsistent results, or were subject to possible confounding from other exposures (12-20).

Laboratory studies in this area have also been confusing and conflicting. While some animal studies suggested that RF fields accelerate the development of cancers, other studies found no carcinogenic effect (21).

Obviously, there is an urgent need for extensive, well-conducted epidemiological and laboratory studies (21-24).

An opportunity for studying the effect of RF radiation presented itself in South Netanya, where a cell-phone transmitter station was located in the middle of a small area. We took advantage of the fact, that most of the population in the investigated area belong to one outpatient clinic (of DW), and undertook an epidemiologic assessment, in which we compared the cancer incidence of this area to those of a nearby clinic, to the national incidence rates of the whole country and to the incidence rates in the whole town of Netanya.

Material and methods

Radio-frequency radiation

The cell-phone transmitter unit is located at the south of the city of Netanya in an area called Irus (area A). It first came into service in 7/96. The people in this area live in half a circle with a 350 meter radius centered on the transmitter.

The antenna is 10 meters high. The antenna bears total maximum transmission power at frequencies of 850 MHz of 1500 watt when working at full power.

Both measured and predicted power density (for the frequencies of 850 MHz) in the whole exposed area were far below $0.53 \mu\text{w}/\text{cm}^2$ —thus the power density is far below the current guidelines which are based on the thermal effects of RF exposure. Exact measured power density in each house are described in table 1.

The current Israeli standard uses 50 packets/sec with Time-Division-Multiple-Access (TDMA) quadrature modulation. The antenna produces 50 packets/sec, using a 3:1 multiplexed Time-Division-Multiple-Access (TDMA) modulation with a 33% duty cycle.

Statistical analysis:

We conducted a cancer incidence study to investigate the incidence of cancer cases of individuals exposed to a cell-phone transmitter station, in comparison to those of a nearby clinic, to the national incidence rates of the whole country and to the incidence rates in the whole town of Netanya.

The cohort included 622 people living in the Irus area (area A) for at least 3-7 years and were patients of one health clinic (of DW). The exposure began in 7/96 which was 1 year before the start of our study.

Statistical analysis was based on the comparison of observed and expected numbers of cancer cases.

In order to compare incidence rates, 95% confidence intervals were computed.

The observed number of cancer cases is the number of all the cancer cases in the exposed cohort in the period between 7/97 - 6/98.

In order to estimate relative risk, rate ratios were computed using the rate of 3 different cohorts as the base (the expected values):

The rate in a nearby clinic (which serves a population of 1222 people, all of them living in area B) during the same period of time, i.e. 7/97 - 6/98. In order to compare area A and area B populations we used:

χ^2 test to compare origin and sex division

t- test to compare age means

The national incidence rates of the whole country.

The incidence rates in the whole town of Netanya where the 2 clinics (of area A and B) are located. The data of 2 and 3 were given to us by the Israel cancer registry and are updated to the years 91-94.

We also examined the history of the exposed cohort (of the A area) for malignancies in the 5 years before the exposure began and found only 2 cases in comparison to 8 cases detected one year after the transmitter station came into service.

Results

Of the 622 people of area A, eight cases of different kinds of cancer were diagnosed in a period of only one year (from July 1997 to June 1998). Details on these cases are presented in Table 1. Briefly, we found 3 cases of breast carcinoma, and one case of ovary carcinoma, lung carcinoma, Hodgkin's disease, osteoid osteoma, and hypernephroma.

This rate of cancers in the population of area A was compared both with the rate of 31 cases per 10,000 per year in the general population and the 2/1222 rate recorded in a nearby clinic. To each one of the rates, a 95 percent confidence interval was calculated (Table 2): the rates in area A were significantly higher than both those in area B, and the population as a whole.

A comparison of the relative risk revealed that there were 4.15 times more cases in area A than in the entire population.

The population characteristics of areas A and B were very similar (Table 2-5). The χ^2 test for comparing gender and origin frequencies showed no significant differences in these parameters between the two areas. Age means, as compared by t-test and age distribution stratum also showed no significant difference between the two groups.

Table 2a lists the rates of cancer incidence of areas A and B compared to data of the whole town of Netanya. The comparison clearly indicated that the cancer incidence of women in area A is significantly higher ($p < 0.0001$) compared with that of the whole city.

Discussion

Our study indicates an association between an increased incidence of cancer and living in proximity to a cell-phone transmitter station.

Studies of this type are prone to biases. Possible methodological artefacts to explain our alarming results were considered:

Differences in socioeconomic class and employment status, and demographic heterogeneity due to differences in age, sex and ethnicity were excluded. The two areas that were compared have very closely matched environment, workplace and occupational characteristics.

Confounding variables affecting individuals could not be absolutely adjusted for, however, there was no ionizing radiation that could affect the whole community except the previously mentioned mobile antenna station. There is no traffic density in this area, neither is there any industry or any other air pollution. The population of area A

(on which adequate data could be gathered) did not suffer from uncommon genetic conditions, nor did they receive carcinogenic medications.

Differences in diagnosis and registration of cancer cases. Although we cannot altogether exclude the possibility that higher awareness of the physician responsible for area A led to an artificial increase in cancer cases in this area, this possibility seems to us very unlikely, since both are qualified family physicians.

Several findings are of particular interest:

The measured level of RF radiation (power density) in the area was low; far below the current guidelines based on the thermal effects of RF exposure. We suggest, therefore, that the current guidelines be re-evaluated.

The enormous short latency period; less than 2 years, indicates that if there is a real causal association between RF radiation emitted from the cell-phone base station and the cancer cases (which we strongly believe there is), then the RF radiation should have a very strong promoting effect on cancer at very low radiation!

Although the possibility remains that this clustering of cancer cases in one year was a chance event, the unusual sex pattern of these cases, the 6 different cancer kinds, and the fact that only one patient smoked make this possibility very improbable and remote. It should be noted that 7 out of 8 cancer cases were women, like in the work of Maskarinec (25) who found 6 out of 7 leukemia cases in proximity to radio towers to occur in girls. Such unusual appearances of cancer cases due to one accused factor on two completely different occasions is alarming.

We are aware of at least 2 areas in which a drastic increase in the incidence of cancer cases occurred near a cell-phone antenna, however, the setup was not suitable for a well design study of those cases. In one of them (which also got publication in the daily newspapers) there were 6 out of 7 cancer cases in women working in a store in close proximity to a cell-phone antenna.

In conclusion, the results of this study showed that there was a significantly greater incidence of cancers of all kinds within the vicinity of a cell-phone transmitter station.

It would be certainly too premature to draw any conclusions from our results before they are confirmed and repeated by other studies from other areas, particularly in view of the fact that a great majority of papers on this subject showed that RF fields and mobile telephone frequencies were not genotoxic, did not induce genetic effects in vitro and in vivo, and were not found to be teratogenic or to induce cancers (24). The results of this paper should, however, serve as an alarm and emphasize the need for further investigations.

Addendum

At one year following the close of the study, 8 new cases of cancer were diagnosed in area A and two cases in area B. Among the cases diagnosed in area A was one of osteoid osteoma, the second case from the beginning of the study.

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The opinions expressed herein are solely those of the writers and do not necessarily reflect the opinions of the institutions with which the writers are associated.

Table 1: Cancer cases in area A

NAME	AGE	SEX	ORIGIN ¹	SMO - KIN G	CANCER TYPE	Measured power density in $\mu\text{w}/\text{cm}^2$
Hemda	52	f	ash	No	Ovary ca stage 1	$0.3\mu\text{w}/\text{cm}^2$
Edna	42	f	sph	No	Breast ca in situ	$0.4\mu\text{w}/\text{cm}^2$
Tania	54	f	ash	No	Breast ca	$0.5\mu\text{w}/\text{cm}^2$
Neli	67	f	ash	Yes	Breast ca	$0.4\mu\text{w}/\text{cm}^2$
Galit	24	f	ash	No	Hodgkins	$0.5\mu\text{w}/\text{cm}^2$
Miriam	61	f	sph	No	Lung ca	$0.3\mu\text{w}/\text{cm}^2$
Masal	37	f	sph	No	Osteoid osteoma	$0.4\mu\text{w}/\text{cm}^2$
Max	78	m	ash	No	Hypernephroma	$0.3\mu\text{w}/\text{cm}^2$

1. Origin: ash - Ashkenazien Jews sph - Spharadic Jews

Table 2: Cancer rates in area A, B and the total population.

	No. of cancer cases	populati on size	Rate per year per 10,000	confide interval lower limit	ce (95%) upper limit	relative risk
Area A	8	622	129	40.1	217.2	4.15
Area B	2	1222	16	-6.3	39.0	0.53
total populat	31	10,000	31	20.1	41.9	1.00

Table 2a: Cancer rates in area A, B and the whole town.

	Male		Female	
	rate	Relative rate	rate	relative rate
Area A	33	1.4	262	10.5
Area B	17	0.7	16	0.6
Whole town	24	1	25	1

Table 3: Comparing area A to area B by gender.

Gender	Area A		Area B	
	N	%	N	%
male	290	49	669	49
female	305	51	685	51

Table 4: Comparing area A to area B by origin.

Origin	Area		Area	
	N	%	N	%
Sfaradic	340	55	551	45
Ashkenaz	239	38	620	51
Russian	41	7	51	4

Table 5: Comparing age means in both areas.

	Area A		Area B	
	mean	Std	mean	std
age	26.5	17.9	25.5	12.4

Table 5: Age distribution by stratum.

	0-1	1-10	10-20	20-30	30-40	40-50	50-60	60-70	>70
IRUS	16	143	157	65	70	88	41	21	21
POLEG	31	285	257	139	180	158	83	55	34

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Mobile Phone Radiation Induces Reactive Oxygen Species Production and DNA Damage in Human Spermatozoa *In Vitro*

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Abstract

Background

In recent times there has been some controversy over the impact of electromagnetic radiation on human health. The significance of mobile phone radiation on male reproduction is a key element of this debate since several studies have suggested a relationship between mobile phone use and semen quality. The potential mechanisms involved have not been established, however, human spermatozoa are known to be particularly vulnerable to oxidative stress by virtue of the abundant availability of substrates for free radical attack and the lack of cytoplasmic space to accommodate antioxidant enzymes. Moreover, the induction of oxidative stress in these cells not only perturbs their capacity for fertilization but also contributes to sperm DNA damage. The latter has, in turn, been linked with poor fertility, an increased incidence of miscarriage and morbidity in the offspring, including childhood cancer. In light of these associations, we have analyzed the influence of RF-EMR on the cell biology of human spermatozoa in vitro.

Principal Findings

Purified human spermatozoa were exposed to radio-frequency electromagnetic radiation (RF-EMR) tuned to 1.8 GHz and covering a range of specific absorption rates (SAR) from 0.4 W/kg to 27.5 W/kg. In step with increasing SAR, motility and vitality were

significantly reduced after RF-EMR exposure, while the mitochondrial generation of reactive oxygen species and DNA fragmentation were significantly elevated ($P < 0.001$). Furthermore, we also observed highly significant relationships between SAR, the oxidative DNA damage bio-marker, 8-OH-dG, and DNA fragmentation after RF-EMR exposure.

Conclusions

RF-EMR in both the power density and frequency range of mobile phones enhances mitochondrial reactive oxygen species generation by human spermatozoa, decreasing the motility and vitality of these cells while stimulating DNA base adduct formation and, ultimately DNA fragmentation. These findings have clear implications for the safety of extensive mobile phone use by males of reproductive age, potentially affecting both their fertility and the health and wellbeing of their offspring.

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Introduction

Male infertility is a distressingly common condition affecting about 1 in 20 of the male population [1]. In a majority of cases, the male partner produces sufficient numbers of spermatozoa to achieve fertilization but there are functional defects in these cells that prevent conception from occurring [2]. Despite several decades of research, the causes of such functional deficiencies in human spermatozoa remain largely unresolved. However, one contributory factor that has recently emerged is the quality of the sperm DNA delivered to the oocyte at the moment of fertilization [3]. Fragmentation of DNA in the male germ line has been associated with impaired fertilization, poor embryonic development, high rates of miscarriage and an increased incidence of morbidity in the offspring, including childhood cancer [3], [4]. In view of the seriousness of these clinical outcomes, attention has recently focused on the environmental and genetic factors that might be involved in the aetiology of DNA damage in the male germ line.

These investigations have suggested that one of the environmental factors potentially involved in the etiology of DNA damage in human spermatozoa is an increased exposure to radio-frequency electromagnetic radiation (RF-EMR) emitted from mobile phones. This association was initially suggested by an epidemiological study which found negative correlations between mobile phone usage and various attributes of semen quality, particularly motility [5]. This was immediately followed by an experimental study involving exposure of male mice to RF-EMR, which revealed a significant impact on the integrity of both the mitochondrial and nuclear genomes [6]. Recently, the negative impact of mobile phone usage on semen quality in human males was confirmed in a study that found the duration of exposure to be correlated with defects in sperm count, motility, viability, and normal morphology [7]. In light of these data, there is now an urgent need to determine whether exposure of human spermatozoa to RF-EMR can also induce DNA damage and to resolve the cellular mechanisms involved.

Several studies have found an association between human health and exposure to RF-EMR, with emphasis on a range of clinical conditions including childhood leukaemia, brain tumours, genotoxicity and neurodegenerative disease [8], [9]. While the cellular mechanisms underpinning these effects have not been completely resolved, it has been suggested that oxidative stress could be a key factor [10]. However, extensive analysis of the importance of oxidative stress in mediating the pathological effects of RF-EMR has generated conflicting results, possibly due to differences in the fundamental redox

susceptibility of the cell lines employed in these analyses [11]. In this context, it is significant that human spermatozoa are uniquely sensitive to oxidative stress for a variety of reasons. Firstly, these cells are largely devoid of the cytoplasm that in somatic cells houses the antioxidant enzymes that offer a first line of defense against free radical attack [12]. Secondly, these cells possess abundant targets for the induction of peroxidative damage including polyunsaturated fatty acids and DNA [12]–[14]. Thirdly, these cells are professional generators of reactive oxygen species, that appear to emanate largely from the sperm mitochondria and, possibly, plasma membrane NAD(P)H oxidases [15], [16]. Thus if any cell type would be vulnerable to the oxidative stress reportedly generated on exposure to RF-EMR, it would be human spermatozoa. In light of these considerations, we have conducted a careful analysis of the biological consequences of exposing human spermatozoa to RF-EMR. The study design involved overnight exposure to RF-EMR at a defined frequency (1.8 GHz), over a range of SAR values that both covered the emission characteristics of mobile phones and generated sufficient dose-response data to shed light on the underlying pathophysiological mechanisms. Moreover, the temperature of the incubations was maintained at 21°C to avoid any secondary heating effects. The results clearly demonstrate that exposure to this type of radiation not only stimulates free radical generation by the sperm mitochondria but also creates a state of oxidative stress characterized by the formation of oxidative base adducts and DNA fragmentation. These data clearly have important implications for the safety of mobile phone use and highlight the potential importance of RF-EMR in the etiology of male infertility and childhood disease.

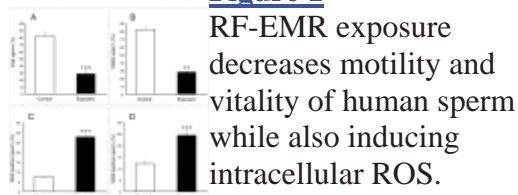
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Results

RF-EMR disrupts human sperm motility and vitality and induces intracellular reactive oxygen species (ROS) production

In an initial experiment, functional human spermatozoa isolated from the high density region of Percoll gradients and suspended in BWW medium were exposed to RF-EMR at an SAR of 27.5 W/kg. This exposure induced a highly significant decline in both vitality ($p < 0.001$; [Figure 1A](#)) and motility ($p < 0.01$; [Figure 1B](#)) compared with the unexposed controls. Exposed spermatozoa also produced significantly higher amounts of ROS than background levels as measured by both the dihydroethidium (DHE) ($p < 0.001$; [Figure 1C](#)) and MitoSOX red (MSR) probes ($p < 0.001$; [Figure 1D](#)) suggesting that free radical generation had been initiated as a consequence of RF-EMR and that the mitochondria were significantly involved in this response.

[Figure 1](#)

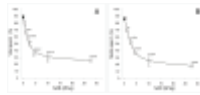


RF-EMR has a negative impact on human spermatozoa over a range of SAR values

In light of these results we then extended the range of SAR values over which the consequences of RF-EMR radiation were examined (0.4 W/kg–27.5 W/kg) to include the values covered by conventional mobile phones (0.5 W/kg–1.5 W/kg).

High quality spermatozoa selected in discontinuous Percoll gradients displayed a decline in both vitality and motility after exposure to RF-EMR in a dose- dependent manner. The control populations maintained an average vitality of 89%; however, significant reductions in vitality were observed at exposure levels as low as 1.0 W/kg ($p<0.01$) ([Figure 2A](#)). Similarly, the control populations maintained motilities at an average of 86% over the incubation period, however after exposure to RF-EMR at levels of 1.0 W/kg, motility was observed to significantly decrease to 68% ($p<0.05$) and decreased still further at higher SAR exposures ([Figure 2B](#)).

Figure 2

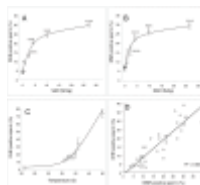


RF-EMR exposure reduces motility and vitality of human spermatozoa, in an SAR dependent manner.

Reactive Oxygen Species are central to the RF-EMR response

Exposure of human spermatozoa to RF-EMR over a range of SAR levels resulted in a dose-dependent activation of ROS generation, as detected by the DHE probe ([Figure 3A](#)). In this analysis, a significant increase in ROS positive cells was observed after exposure at 1.0 W/kg ($p<0.05$); thereafter ROS production rose rapidly with SAR values up to 4.3 W/kg and then began to plateau reaching a peak of 30% at the highest exposure levels assessed ([Figure 3A](#)). To determine whether such increases in ROS production might originate from the sperm mitochondria, MSR was employed as a probe. Spermatozoa exposed to increasing levels of RF-EMR, generated a significant, dose-dependent increase in ROS generation by the mitochondria. The response rose rapidly following RF-EMR exposure reaching statistical significance ($p<0.001$) at an SAR value 2.8 W/kg at which point 16% of the exposed cells were MSR positive. At SAR values above 4.3 W/kg, RF-EMR induced mitochondrial ROS began to plateau reaching 30% at the maximal SAR values assessed ([Figure 3B](#)). By plotting the DHE positive cells against the MSR response for the entire data set ([Figure 3D](#)) we observed an extremely strong correlation ($R^2 = 0.823$) between these signals, suggesting that a majority of the ROS production elicited by RF-EMR involved electron leakage from the mitochondrial electron transport chain.

Figure 3



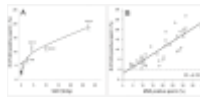
RF-EMR induces ROS generation in human spermatozoa, in an SAR-dependent manner unrelated to thermal effects.

In order to control for bulk thermal effects of RF-EMR exposure, spermatozoa were also incubated at temperatures ranging from 21°C–50°C for 2 h ([Figure 3C](#)). This analysis did reveal an effect of heat on free radical generation by human spermatozoa possibly due to the activation of an apoptotic response, however these effects were only significant above 40°C. Thus at the temperature at which these experiments were performed (21°C) the highest observed RF-EMR-induced temperature rise (+0.4°C at 27.5 W/kg), could not of itself account for the increased ROS response observed across the range of SAR settings evaluated in this study.

RF-EMR induces oxidative DNA damage (8-OH-dG)

In order to determine whether the ROS generation induced on exposure of human spermatozoa to RF-EMR resulted in a state of oxidative stress, we monitored the expression of 8-hydroxy-2'-deoxyguanosine (8-OH-dG), a marker for oxidative damage to sperm DNA. As the SAR level was increased, the amount of oxidative DNA damage expressed in the spermatozoa became elevated ([Figure 4A](#)). A significant increase in 8-OH-dG expression became apparent at low SAR values (<5.0 W/kg) rising to a maximum of around 20% at the highest levels of exposure (27.5 W/kg). By plotting the 8-OH-dG positive cells against the MSR signal ([Figure 4B](#)) it was apparent that a strong positive correlation existed between the two parameters ($R^2 = 0.727$); the higher the level of mitochondrial ROS generation, the greater the degree of oxidative DNA damage in the spermatozoa.

Figure 4

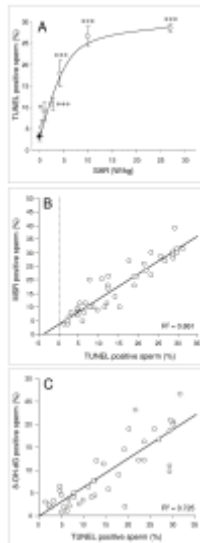


RF-EMR induces oxidative DNA damage in human spermatozoa.

RF-EMR induces DNA fragmentation in human spermatozoa

To determine whether the oxidative DNA base damage precipitated by RF-EMR-induced ROS generation had any impact on DNA strand breaks in human spermatozoa, the terminal deoxynucleotidyl transferase dUTP nick end labeling (TUNEL) assay was utilized. As illustrated in [Figure 5A](#), human spermatozoa responded to RF-EMR exposure, with a significant increase in DNA strand breaks at an SAR of 2.8 W/kg ($p < 0.05$) that increased rapidly with rising SAR values and then reached a plateau so that at the highest SAR level assessed (27.5 W/kg), 29% of the cells expressed significant DNA fragmentation. This DNA damage was highly correlated with free radical generation by the sperm mitochondria giving a correlation coefficient of $R^2 = 0.861$ ([Figure 5B](#)). Moreover, the level of DNA fragmentation was highly correlated with 8-OH-dG formation ($R^2 = 0.725$; [Figure 5C](#)) such that sperm cells exhibiting high levels of oxidative DNA damage, also possessed high levels of DNA fragmentation.

Figure 5



RF-EMR induces DNA fragmentation in human spermatozoa.

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Discussion

While a high proportion of the male population suffers from infertility associated with defective sperm function [17], the etiology of this condition remains largely unresolved. Notwithstanding the general paucity of information in this area, recent studies have highlighted the interesting finding that male infertility patients are frequently characterized by high levels of DNA damage to their spermatozoa [18]. In light of these data, we have hypothesized that the disruption of sperm fertilizing potential and the concomitant presence of high levels of DNA damage in the sperm nucleus involves a common causative mechanism in the form of oxidative stress [19].

Oxidative stress has been known for some time to limit the fertilizing potential of human spermatozoa through the induction of peroxidative damage to the sperm plasma membrane [13], [20]. Oxidative stress is also known to be associated with DNA damage in human spermatozoa [21]. Furthermore, the source of the free radicals responsible for generating such stress appears to be the mitochondria [15]. However, the factors responsible for inducing the mitochondria to leak electrons and propagate the production of ROS have not been elucidated. The research described in this article suggests that one of the key environmental factors involved in the stimulation of sperm mitochondria to produce high levels of ROS, might be excess exposure to RF-EMR from sources such as mobile phones.

In a pilot study, human spermatozoa were found to respond to RF-EMR (at 1.8 GHz with a SAR of 27.5 W/kg) with a range of negative changes including dramatic declines in both sperm vitality and motility. We also observed significant increases in both cytoplasmic ROS levels (DHE) as well as mitochondrial ROS levels (MSR) after RF-EMR exposure. We have previously shown that the chemical induction of mitochondrial ROS production with rotenone can precipitate a state of oxidative stress leading to high levels of lipid peroxidation and a loss of sperm motility [15]. Therefore, these data highlight the particular vulnerability of human spermatozoa to oxidative attack and the potential significance of sperm mitochondria in the generation of free radicals.

To assess whether similar effects could be observed at lower power densities, closer to the SAR values associated with mobile phones (0.5–1.5 W/kg) a dose-dependent analysis was conducted. In addition to the conventional assessments of motility and vitality, assays were included to assess the potential for RF-EMR to induce sperm DNA damage and further, whether the DNA damage was oxidative in nature. Confirmation of the detrimental effects of RF-EMR on human sperm was again observed. Over the power density range employed, a significant ($P < 0.001$) dose-dependent response for all sperm parameters was observed, including motility, vitality, ROS generation by the whole cell, ROS generation by the mitochondria, oxidative DNA damage and DNA fragmentation. Furthermore, the profiles of all the observed effects with respect to SAR were intriguingly similar, suggesting a common underlying mechanism.

Specifically, all of the responses examined showed an extremely rapid change at low SAR exposures that then reached a plateau at a point where around 30% of the sperm population was affected. This suggests that while we were careful to use only Percoll-purified, high quality spermatozoa in this analysis, there exists within this cell population, a cohort of spermatozoa that are particularly vulnerable to the induction of oxidative stress by RF-EMR. These spermatozoa may have compromised mitochondria, poorly

remodeled chromatin or a combination of such factors [15], [22]. Heterogeneity within the sperm population is a feature of the human condition. However, this does not mean that a majority of spermatozoa would not, ultimately, be affected by RF-EMR in vivo; much would depend on the duration of exposure. In vitro, we are limited by the inability of human spermatozoa to survive for more than 24 hours in a simple defined culture medium. In vivo, spermatozoa may take up to a week to move from the seminiferous tubules in the testes to the cauda epididymis and during the whole of this time they would be vulnerable to RF-EMR exposure [23].

We recognize that these studies were conducted using spermatozoa suspended in a simple defined culture medium rather than the epididymal plasma in which they would be suspended in vivo. Nevertheless the fact that effects on sperm quality have previously been observed in both whole animal radiation experiments [3] and in epidemiological studies of human subjects exposed to various levels of mobile phone radiation [5], [7], [24], emphasizes the biological and clinical relevance of these findings. Moreover, another recent study has found that exposing human spermatozoa to mobile phone radiation for 1 hour leads to significant declines in motility and vitality in concert with an increase in cellular reactive oxygen species generation [25]. The levels of RFEMR exposure were not quantified in this study nor were the sources of ROS identified. Nevertheless, these findings reinforce the general conclusions generated in this paper, particularly with respect to central role played by oxidative stress. The ever-increasing prevalence of mobile communications technology means that humans are now exposed to higher amounts of RF-EMR than ever before. Mobile phones are commonly carried in bags or in pockets in very close proximity to the body. In addition to this, these devices can be stored adjacent to the same part of the body for extended periods of time. In this context, exposure of the male reproductive system to RF-EMR is clearly a significant issue.

The particular significance of the present study is that it not only demonstrates a direct effect of RF-EMR on sperm motility, vitality and DNA integrity but also identifies a potential causative mechanism involving electron leakage from the mitochondrial electron transport chain and the induction of oxidative DNA damage. In part, these mechanistic insights have been achieved because the cell type used in these studies, the human spermatozoon, has an extremely simple cellular architecture, lacking significant cytosol and possessing few cellular organelles other than the sperm nucleus, flagellum and mitochondria. One consequence of this structure is that these cells are uniquely vulnerable to oxidative stress. Moreover, such stress is already known to induce the functional and structural lesions observed in this study including both a loss of motility mediated by peroxidative damage to the sperm plasma membrane, as well as the formation of DNA base adducts in the sperm nucleus that ultimately lead to DNA fragmentation [26], [27].

Notwithstanding the specialized nature of mammalian spermatozoa, the mechanisms suggested by this study may also apply to RF-EMR-mediated damage in other cell types. The RF-EMR used for communications, including mobile phone networks, is not of high enough power to be classed as ionizing radiation. The latter has sufficient energy to pull away electrons, dramatically altering the properties of affected molecules and typically creating extremely reactive radical species. RF-EMR does not contain sufficient energy for these processes. Nevertheless, this form of radiation may have other effects on larger

scale systems such as cells and organelles, which stem from the perturbation of charged molecules and the disruption of electron flow [28], [29]. Mitochondria have one of the largest standing membrane potentials in the body and their energetic functions are entirely dependent on the regulated movement of electrons and protons within the inner mitochondrion membrane. Theoretically, such fluxes might be susceptible to disruptions in local electric fields induced by RF-EMR, offering a potential link between this form of radiation and the non-thermal biological effects observed in this study.

This study clearly demonstrates that RF-EMR can damage sperm function via mechanisms that involve the leakage of electrons from the mitochondria and the creation of oxidative stress. These findings have immediate implications for the high rates of male infertility seen in our species, a majority of which is idiopathic. Furthermore, the fact that sperm DNA is damaged by this form of radiation has additional implications for the health and wellbeing of children born to fathers who have experienced high levels of occupational or environmental exposure to RF-EMR around the time of conception. Overall, these findings raise a number of related health policy and patient management issues that deserve our immediate attention. Specifically we recommend that men of reproductive age who engage in high levels of mobile phone use, do not keep their phones in receiving mode below waist level.

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Methods

Ethics Statement

This study was conducted according to the principles expressed in the Declaration of Helsinki. The study was approved by the University of Newcastle (H-712-0799). All patients provided written informed consent for the collection of samples and subsequent analysis.

Reagents and Solutions

All chemicals and reagents used in this research were obtained from Sigma Aldrich (Sigma Chemical Co., St. Louis, MO) unless stated otherwise. All reagents used were of research grade. All fluorescent probes were purchased from Molecular Probes Inc. (Eugene, OR). Biggers, Whitten and Whittingham (BWW) media supplemented with 1 mg/ml polyvinyl alcohol (PVA) was used in all experiments [30]. It was prepared fresh as required and kept at 37°C with an osmolarity in the range of 290–310 mOsm/kg.

Human spermatozoa

Institutional and State Government ethical approval was secured for the use of human semen samples for this research. The donors were students from the University of Newcastle donor program who had no known prior male reproductive pathologies including varicocele and infection. From this pool, 22 normozoospermic donors were used in this study. The average (\pm SEM) age of these donors was 24.1 ± 1.1 y. After allowing at least 30 min for liquefaction to occur, spermatozoa were separated from seminal plasma on a discontinuous two-step Percoll gradient, as described [16]. The isolated spermatozoa were washed with 10 ml BWW, centrifuged at $600 \times g$ for 15 min and finally resuspended in HEPES-buffered BWW at a concentration of 20×10^6 /ml supplemented with 1 mg/ml PVA. After acquiring each sperm fraction, the vitality, motility and cell density of the spermatozoa were evaluated. Vitality was determined by transferring 5 μ l of each cell fraction onto a microscope slide followed by the addition of 5 μ l of 0.5% eosin; the percentage of non-viable cells staining pink was then assessed by

light microscopy. Motility was assessed by transferring 6 μ l of the same sample onto a slide which was then covered with a coverslip and examined by phase contrast microscopy. For both the vitality and motility assessments, 100 cells were counted and the results expressed as a percentage.

Radio Frequency Electromagnetic Radiation and Waveguide

In this study, a cylindrical waveguide copied from the design by Gajda *et al* [31] was constructed such that 1.8 GHz radiation could propagate along the waveguide and also so that 35 mm Petri dishes could be accommodated within the waveguide. To produce the radiation, a 3 GHz function generator (E4431B; Agilent, Palo Alto, CA) was used to generate a pure tone of 1.8 GHz. This signal was amplified by a linear radio-frequency (RF) amplifier and the amplifier output was split and connected through a matching network to antennae in the waveguide. The antenna matching circuit was tuned for maximum energy transfer to the antenna. The waveguide was encased in a brass mesh Faraday cage and the end was filled with 15 cm thick carbon-impregnated foam (RFI Industries, Bayswater, Victoria, Australia), which absorbs RF radiation, minimizing the reflection of radiation back into the waveguide and reducing the RF power by more than 50 dB outside the Faraday cage compared to the power at the amplifier output. A spectrum analyser (Advantest, Tokyo, Japan) connected to a Hameg HZ530 E-field probe (Hameg GmbH, Mainhausen, Germany) was used to check radiation levels and frequency prior to irradiation. The SAR values for the irradiations were calibrated by measuring the temperature rise in saline solution at power levels 20 dB or 100 \times higher than for the normal irradiations. The calibration procedure is complicated because (i) the saline solution loses heat energy to the surroundings at the same time as it is heated by the RF radiation and (ii) the temperature rise must be measured by an electronic thermometer to achieve the 0.1 $^{\circ}$ C resolution required; however, the RF field interfered with the thermometer operation. As a consequence of these factors, the saline temperature was measured as a function of the time delay after the RF field was turned off and the temperature change extrapolated back to zero delay. Multiple measurements were made for RF irradiation times varying from 15 to 120 s and temperature increases up to 2.2 $^{\circ}$ C above the ambient temperature were measured. After allowing for heat losses to the surroundings, the power level of 38.8 dBm at the amplifier output used in these measurements gave rise to a saline temperature rise of $0.053 \pm 0.008^{\circ}\text{Cs}^{-1}$, giving a SAR of $220 \pm 33 \text{ Wkg}^{-1}$. This error is similar to the variation in SAR observed in reference paper as a function of probe position [31]. The values of SAR reported in this paper were calculated from the above SAR, linearly scaled by the amplifier output power.

Following sperm purification and initial analysis, the high density Percoll fraction was prepared as a 1 ml suspension in BWW containing 5×10^6 cells and transferred into 35 mm Petri dishes. The cells to be irradiated were placed inside the waveguide while the control cells were placed adjacent to the waveguide but outside the Faraday cage. The SAR levels (0.4–27.5 W/kg) were fixed by setting the RF source to the appropriate dBm value. For all RF-EMR exposures (and respective controls) spermatozoa were incubated at room temperature (21 $^{\circ}$ C) for a period of 16 h. Motility and vitality was measured prior to as well as after treatment. ROS and DNA damage assays were completed on both the exposed cells and respective controls after incubation.

Dihydroethidium Assay

Dihydroethidium (DHE) is a poorly fluorescent 2-electron reduction product of ethidium that on oxidation produces DNA sensitive fluorochromes that generate a red nuclear fluorescence when excited at 510 nm. The results obtained with this probe have been validated as a measure of the ability of human spermatozoa to generate ROS, including definitive identification of the superoxide anion [32]. For the assay, DHE and the vitality stain, SYTOX[®] Green (Molecular Probes), were diluted in BWB/PVA and added to 2×10^6 spermatozoa in a final volume of 200 μ l comprising 175 μ l of purified sperm suspension, 5 μ l of test compound and 20 μ l of the DHE:SYTOX[®] green mixture to give final concentrations of 2 μ M DHE and 0.5 μ M SYTOX[®] green. The cells were then incubated in the dark at 37°C for 15 min, washed once (600 \times g for 5 min) and the resultant red and green fluorescence measured on a FACSCalibur flow cytometer (Becton Dickinson, San Jose, CA), as described [32]. The unstained control displayed 0.09% \pm 0.03% DHE positivity, the DHE positive control (treated with 100 μ M arachidonic acid) displayed 99% \pm 1% DHE positivity and the SyG positive control (frozen-thawed cells) displayed 98% \pm 1% SyG positivity. The inclusion of SyG in this assay ensured that the production of ROS was only being assessed in live cells.

MitoSOX Red (MSR) Assay

MSR is a poorly fluorescent compound similar to DHE but carrying a charge that results in the selective accumulation of this probe within the mitochondria. Following reaction with the superoxide anion, MSR produces DNA sensitive fluorochromes that generate a red fluorescence when excited at 510 nm that can be detected by flow cytometry.

As with the DHE assay, SyG was used in order to ensure that only live cells were evaluated in this assay. MSR and SyG stock solutions (in DMSO) were diluted in BWB/PVA and 20 μ l of each added to each treatment to give final concentrations of 2 μ M and 0.05 μ M respectively in a final volume of 200 μ l. The cells were incubated at 37°C away from light for 15 min, centrifuged at 600 \times g for 5 min and the supernatant discarded. The pellet was then washed in 200 μ l BWB/PVA, resuspended in 1 ml of this medium and transferred to 5 ml FACS tubes for analysis by flow cytometry. [15] The unstained control displayed 0.66% \pm 0.32% MSR positivity, the MSR positive control (treated with 100 μ M arachidonic acid) displayed 96% \pm 3% MSR positivity and the SyG control displayed 96% \pm 1% SyG positivity.

Assay for 8-hydroxy-2'-deoxyguanosine (8-OH-dG)

The formation of the 8-OH-dG base lesion, which is a biomarker for oxidative stress, was measured using an anti-8-OH-dG antibody (supplied in the Biotrin OxyDNA test Kit, Biotrin International Ltd, Dublin, Ireland) which was conjugated with a fluorescent label, fluorescein isothiocyanate (FITC). The level of FITC fluorescence was then measured using flow cytometry. For the positive control, spermatozoa were incubated for 1 h at room temperature with H₂O₂ (2 mM) and FeCl₂•4H₂O (1 mM) in a final volume of 200 μ l BWB. The initial H₂O₂ concentration was determined by measuring absorbance at 240 nm ($\epsilon = 43.6 \text{ M}^{-1}\text{cm}^{-1}$). The cells were then washed twice in BWB, resuspended in 100 μ l of 2 mM dithiothreitol (DTT) in BWB and incubated for 45 min at 37°C. After centrifugation at 600 \times g for 5 min, the cells were then fixed by resuspending the pellet in 100 μ l Phosphate Buffered Saline (PBS) and 100 μ l 4% paraformaldehyde and incubated at 4°C for 15 min. The cells were then washed in PBS and stored in 200 μ l 0.1 M glycine at 4°C and stored for a maximum of 1 week. Fixed cells were washed and resuspended in 100 μ l 0.2% Triton-X and incubated at room temperature for 15 min. Cells were then

washed in Wash Solution (Biotrin OxyDNA test Kit, Biotrin International Ltd.) and 50 µl blocking solution (Biotrin OxyDNA test Kit, Biotrin International Ltd.) added before incubation at 37°C for 1 h. The anti-8-OH-dG antibody was further purified by adding approximately 1 mg of activated charcoal powder, followed by incubation at room temperature for 1 h and centrifugation at 600× g for 5 min. This step was repeated once more for complete removal of the charcoal. The supernatant containing the purified antibody was then added in a 1:50 dilution to the fixed cells in wash solution with a final volume of 100 µl. Finally, cells were washed twice, resuspended in 1 ml PBS and transferred to 5 ml FACS tubes for flow cytometric analysis. The unstained control and positive (H₂O₂/Fe²⁺) control displayed 0.09%±0.02% and 97%±1% 8-OH-dG positivity, respectively.

TUNEL Assay

Spermatozoa were centrifuged (600× g for 4 min) before resuspending the pellet in 100 µl of fresh permeabilization solution (10 mg sodium citrate, 10 µl triton-X in 10 ml dH₂O) and incubating for 2 min at 4°C. The cells were then centrifuged (600× g for 4 min) and the pellets washed with PBS. The positive control samples were treated with 100 µl of DNase I (1 mg/ml) for 30 min at 37°C in a humid environment. TUNEL labeling was achieved with the In Situ Cell Death Detection Kit (Roche Diagnostics, Indianapolis, IN) according to the manufacturer's instructions. Cells were then washed twice in PBS, diluted to a final volume of 500 µl in PBS and kept in the dark for analysis using flow cytometry.

Analysis by Flow Cytometry

For flow cytometry analysis, Falcon 35 (2008) 5 mL polystyrene round bottom tubes were used for aspirating the sample into the fluorescence activated cell sorter (FACS). At least 5,000 cells were analyzed for each assay using a FACS™ caliber (Becton Dickinson) and the gates were set, based on forward and side scatter, such that only spermatozoa were assessed [15]. Fluorescence was measured upon excitation by a 15 mW argon-ion laser at 488 nm and was paired with emission measurements using 530/30 band pass (green/FL-1), 585/42 band pass (red/FL-2) and >670 long pass (far red/FL-3) filters. The FL-1 and the FL-2 filters were used for the vitality stain (SyG) and ROS stain (DHE) respectively. For TUNEL and 8-OH-dG analysis, only the FL-1 filter was used and for these assays. The software used to analyze the data was CellQuest Pro (BD Biosciences, San Jose, CA).

Statistics

All experiments were repeated at least 3 times on independent samples and the results analyzed by ANOVA using the SuperANOVA programme (Abacus Concepts Inc, CA) on a MacIntosh G5 computer; post hoc comparison of group means was determined by Fisher's PLSD test. Differences with a *P* value of <0.05 were regarded as significant. All data are presented as the mean value±SEM.

Footnotes

Competing Interests: The authors have declared that no competing interests exist.

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Male factor

Effects of radiofrequency electromagnetic waves (RF-EMW) from cellular phones on human ejaculated semen: an in vitro pilot study

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Objective

To evaluate effects of cellular phone radiofrequency electromagnetic waves (RF-EMW) during talk mode on unprocessed (neat) ejaculated human semen.

Design

Prospective pilot study.

Setting

Center for reproductive medicine laboratory in tertiary hospital setting.

Samples

Neat semen samples from normal healthy donors (n = 23) and infertile patients (n = 9).

Intervention(s)

After liquefaction, neat semen samples were divided into two aliquots. One aliquot (experimental) from each patient was exposed to cellular phone radiation (in talk mode) for 1 h, and the second aliquot (unexposed) served as the control sample under identical conditions.

Main Outcome Measure(s)

Evaluation of sperm parameters (motility, viability), reactive oxygen species (ROS), total antioxidant capacity (TAC) of semen, ROS-TAC score, and sperm DNA damage.

Result(s)

Samples exposed to RF-EMW showed a significant decrease in sperm motility and viability, increase in ROS level, and decrease in ROS-TAC score. Levels of TAC and DNA damage showed no significant differences from the unexposed group.

Conclusion(s)

Radiofrequency electromagnetic waves emitted from cell phones may lead to oxidative stress in human semen. We speculate that keeping the cell phone in a trouser pocket in talk mode may negatively affect spermatozoa and impair male fertility.

Key Words: Cell phone radiation; radiofrequency electromagnetic waves; sperm; fertility; reactive oxygen species; oxidative stress; EMW

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Effect of cell phone usage on semen analysis in men attending infertility clinic: an observational study

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Objective: To investigate the effect of cell phone use on various markers of semen quality.

Design: Observational study.

Setting: Infertility clinic.

Patient(s): Three hundred sixty-one men undergoing infertility evaluation were divided into four groups according to their active cell phone use: group A: no use; group B: <2 h/day; group C: 2–4 h/day; and group D: >4 h/day.

Intervention(s): None.

Main Outcome Measure(s): Sperm parameters (volume, liquefaction time, pH, viscosity, sperm count, motility, viability, and morphology).

Result(s): The comparisons of mean sperm count, motility, viability, and normal morphology among four different cell phone user groups were statistically significant. Mean sperm motility, viability, and normal morphology were significantly different in cell phone user groups within two sperm count groups. The laboratory values of the above four sperm parameters decreased in all four cell phone user groups as the duration of daily exposure to cell phones increased.

Conclusion(s): Use of cell phones decrease the semen quality in men by decreasing the sperm count, motility, viability, and normal morphology. The decrease in sperm parameters was dependent on the duration of daily exposure to cell phones and independent of the initial semen quality. (Fertil Steril® 2008;89:124–8. ©2008 by American Society for Reproductive Medicine.)

Key Words: Cell phone, electromagnetic radiations, sperm parameters, male infertility

Cell phones have become indispensable devices in our daily life. These phones operate between 400 MHz and 2000 MHz frequency bands and emit radiofrequency electromagnetic waves (EMW). Reports of potential adverse effects of radiofrequency EMW on brain, heart, endocrine system, and DNA of humans and animals are widely reported in the literature. Electromagnetic waves alter brain electroencephalographic activity and cause disturbance in sleep (1); cause difficulty in concentration, fatigue, and headache (2); and increase reaction time in a time-dependent manner (3). They increase the resting blood pressure (4) and reduce the production of melatonin (5). They are also implicated in DNA strand breaks (6). However, the concern that cell phone use might have

adverse impacts on the semen quality has not been extensively addressed.

Infertility affects approximately 15% of couples of reproductive age, and with nearly half of these cases resulting from male factor infertility this area of research is of great interest to both physicians and research scientists (7, 8). The relationship between cell phone use and male infertility remains unclear. Harmful EMW emitted from cell phones may interfere with normal spermatogenesis and result in a significant decrease in sperm quality. There are two reports available that show an effect of cell phones on sperm motility in humans (9, 10). Animal studies indicate that EMW may have a wide range of damaging effects on the testicular function and male germ line (11, 12). Electromagnetic waves can affect reproductive function through both thermal and non-thermal effects (13).

The objective of the present study was to assess the effects of cell phone use on various sperm parameters among patients undergoing infertility evaluation at a male infertility clinic. Our goal was to better understand the role of cell phone use in male infertility and assess the need for any

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protective measures to prevent harmful effects of EMW, if any, on the male reproductive system.

MATERIALS AND METHODS

The study was approved by the Institutional Review Board, and informed consent was obtained from all patients. In this observational study we examined 361 men attending an infertility clinic from September 2004 to October 2005. The age of the study population was 31.81 ± 6.12 years (mean \pm SD). Subjects with a history of smoking, chewing tobacco, alcohol consumption, orchitis, varicocele, tuberculosis, diabetes mellitus, and hypertension were excluded from the study. In addition, patients who suffered from viral/bacterial infection in the past 4 weeks, presented with a history of cardiac, neural, or nephrotic disease, or had a family history of any genetic disease were also excluded.

Semen samples were collected by masturbation in a sterile wide-mouthed calibrated container after an abstinence period of 5 days. Semen analysis was performed according to World Health Organization guidelines to evaluate eight sperm parameters: volume, liquefaction time, pH, viscosity, sperm count, motility, viability, and percentage normal morphology (14). The information on cell phone usage of the patients was recorded and the subjects were divided into 4 groups according to their daily active cell phone usage, i.e., talking time: group A: no use ($n = 40$); group B: <2 h/day ($n = 107$); group C: $2-4$ h/day ($n = 100$); and group D: >4 h/day ($n = 114$). The technicians analyzing the semen samples were blinded to the use of cell phones by the subjects.

Correlation was determined between eight sperm parameters by Pearson correlation coefficients. Multivariate analysis of covariance (MANCOVA) was used to assess the eight sperm parameters among four groups of cell phone users simultaneously, adjusted by patient age (as covariate). When age as a covariate in the MANCOVA was found to be nonsignificant ($F = 0.92$; $P = .4975$), subsequent analysis was done by multivariate analysis of variance (MANOVA). Sperm parameters were transformed to multivariate normals where

appropriate before analysis, and results were reported on a back-transformed scale unless otherwise indicated.

Because patients are often grouped as normal or abnormal based on the sperm count, we also assessed if sperm parameters differed among cell phone use groups within sperm count groups. This was accomplished by dividing our study population into two groups: normospermic (≥ 20 million/mL; $n = 297$) and oligospermic (<20 million/mL; $n = 64$). We also reclassified the subjects into two cell phone user groups based on their frequency of active cell phone use: >4 h/day ($n = 114$) and <4 h/day ($n = 247$) to use a two-way MANOVA for statistical evaluation. Difference in each sperm parameter between these groups was assessed using Bonferroni simultaneous confidence intervals with a significance level at $\alpha = .05$. Statistical software packages R (Version 2.3.0; R Foundation for Statistical Computing, Vienna, Austria) and SAS (Version 9.1, SAS Institute, Cary, NC) were used.

RESULTS

A strong correlation was seen between sperm count, motility, viability, normal morphology, and pH; motility and viability were almost perfectly correlated. Semen analysis in the four cell phone user groups showed a decrease in sperm count, motility, viability, and normal morphology with the increase in daily use of cell phone (Table 1; Fig. 1). The difference between cell phone user groups for each sperm parameter was assessed simultaneously using Bonferroni simultaneous confidence intervals (SCI). The 95% Bonferroni SCI for each variable showed that sperm count, percentage motility, viability, and normal morphology differ significantly among most cell phone use groups (Table 2). A significant difference was seen in the sperm parameters motility, viability, and normal morphology among the two sperm count groups ($F = 21.86$; $P < .0001$) when evaluated by using two-way MANOVA (Table 3).

DISCUSSION

Currently there are over 700 million cell phone users in the world. These phones operate at different frequencies in

TABLE 1

Semen analysis results in four cell phone use groups (values are mean \pm SD).

Parameters	Group A	Group B	Group C	Group D
Volume (mL)	2.86 ± 1.67	3.16 ± 1.62	2.83 ± 1.40	3.37 ± 1.80
Liquefaction time (min)	20.00 ± 3.58	20.04 ± 3.18	20.85 ± 3.56	20.39 ± 4.11
pH	7.67 ± 0.20	7.67 ± 0.18	7.76 ± 0.19	7.78 ± 0.16
Viscosity	3.00 ± 1.01	2.98 ± 1.03	3.11 ± 1.21	2.95 ± 1.14
Sperm count ($\times 10^6$ /mL)	85.89 ± 35.56	69.03 ± 40.25	58.87 ± 51.92	50.30 ± 41.92
Motility (%)	67.80 ± 6.16	64.57 ± 8.47	54.72 ± 10.97	44.81 ± 16.30
Viability (%)	71.77 ± 6.75	68.21 ± 8.65	57.95 ± 11.28	47.61 ± 16.67
WHO morphology (% normal)	40.32 ± 13.06	31.24 ± 12.24	21.36 ± 10.12	18.40 ± 10.38

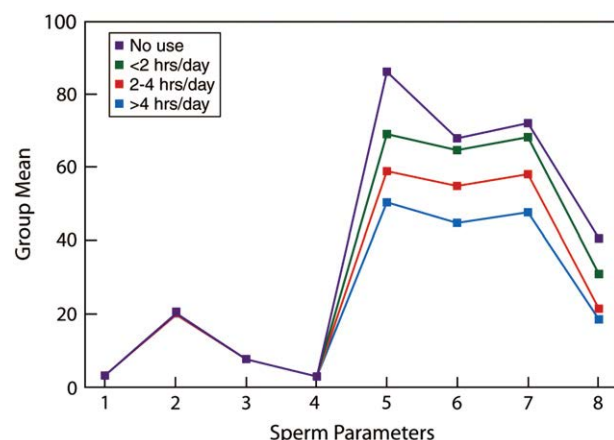
Note: Group A: no use ($n = 40$); group B: <2 h/day ($n = 107$); group C: $2-4$ h/day ($n = 100$); and group D: >4 h/day ($n = 114$).

Means and SD were based on data on the original scale; all analyses were done with appropriately transformed data.

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FIGURE 1

Sperm parameter profile for cell phone use groups. The x-axis lists eight sperm parameters: 1 = volume; 2 = liquefaction time; 3 = pH; 4 = viscosity; 5 = sperm count; 6 = motility; 7 = viability; and 8 = percent normal morphology. The y-axis depicts the mean value of the corresponding sperm parameters for each cell phone use group.



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different countries and continents. Exposure of radiofrequency energy depends upon the frequency of the cellular phone. Analog phones operate at 450–900 MHz, digital phones (Global System for Mobile Communications [GSM]) at 850–1900 MHz, and third-generation phones at approximately 2000 MHz (15). For years the cell phone companies have assured people that cell phones are perfectly safe. For assessing exposure from transmitters located near the body, the most useful quantity is the specific absorption rate (SAR), the amount of radiofrequency energy absorbed from the phone into the local tissues. The SAR of cell phones varies from 0.12 to 1.6 W/kg body weight depending upon the model. In the United States, the upper limit of SAR allowed is 1.6 W/kg (16).

We studied the sperm parameters of 361 males attending an infertility clinic after segregating them into four different groups based on their daily active use of cell phone. We found that most of the comparisons of four sperm parameters: sperm count, motility, viability, and normal morphology between all the cell phone user groups were significantly different. This led us to suggest that the use of cell phones may adversely affect the quality of semen by decreasing the sperm counts, motility, viability, and morphology, which might contribute to male infertility. However, these four sperm parameters showed significant positive correlation among each other. Therefore, the decrease in value of one sperm parameter is bound to reduce the other parameter also. Another significant finding of our study is the decline in the quality of semen based on the active cell phone usage time. The laboratory values of the four sperm parameters were lower in the

TABLE 2

Simultaneous confidence intervals of differences between cell phone use groups evaluating eight sperm parameters.

Parameters	Groups A & B	Groups A & C	Groups A & D	Groups B & C	Groups B & D	Groups C & D
Volume (mL)	–0.091 to 0.072	–0.084 to 0.083	–0.102 to 0.058	–0.389 to 0.053	–0.046 to 0.040	–0.063 to 0.026
Liquefaction time (min)	–2.27 to 2.18	–3.10 to 1.40	–2.60 to 1.87	–2.47 to 0.87	–1.96 to 1.27	–1.19 to 2.10
pH	–0.115 to 0.105	–0.209 to 0.014	–0.223 to –0.004	–0.175 to –0.009 ^a	–0.189 to –0.02 ^a	–0.098 to –0.065
Viscosity	–0.66 to 0.70	–0.80 to 0.58	–0.63 to 0.72	–0.64 to 0.38	–0.47 to 0.52	–0.35 to 0.66
Sperm count ($\times 10^6$ /mL)	–1.67 to 4.40	1.29 to 7.49 ^a	4.05 to 10.03 ^a	–0.85 to 2.57	0.60 to 3.81 ^a	–1.35 to 1.97
Motility (%)	–6.16 to 45.83	12.86 to 65.11 ^a	22.71 to 74.49 ^a	11.04 to 56.09 ^a	22.21 to 66.52 ^a	6.65 to 51.36 ^a
Viability (%)	–5.55 to 48.84	14.04 to 68.70 ^a	24.42 to 78.59 ^a	11.69 to 58.82 ^a	23.55 to 69.92 ^a	7.29 to 54.07 ^a
WHO morphology (% normal)	0.12 to 1.11 ^a	2.65 to 3.66 ^a	4.14 to 5.12 ^a	0.70 to 1.26 ^a	1.60 to 2.12 ^a	–0.12 to 0.41

Note: Group A: no use (n = 40); group B: <2 h/day (n = 107); group C: 2–4 h/day (n = 100); and group D: >4 h/day (n = 114). Means and SD were based on data on the original scale; all analyses were done with appropriately transformed data.

^a Significant ($P < .05$) using multivariate analysis of variance and Bonferroni simultaneous confidence intervals.

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TABLE 3

Difference between two sperm count groups within cell phone use groups evaluating seven sperm parameters.

Sperm Parameters	Group 1, ^a mean ± SD	Group 2, ^b mean ± SD	Simultaneous confidence intervals of difference between groups 1 and 2
Volume (mL)	2.75 ± 1.57	3.17 ± 1.64	−0.078 to 0.029
Liquefaction time (min)	20.39 ± 3.81	20.37 ± 3.61	−1.85 to 1.85
pH	7.80 ± 0.17	7.71 ± 0.18	−0.01 to 0.15
Viscosity	2.90 ± 1.43	3.03 ± 1.03	−0.72 to 0.49
Motility (%)	42.00 ± 17.16	58.96 ± 12.35	−59.49 to −10.31 ^c
Viability (%)	44.62 ± 17.47	62.41 ± 12.77	−62.58 to −11.45 ^c
WHO morphology (% normal)	14.98 ± 9.11	27.71 ± 13.11	−1.69 to −1.05 ^c

Note: Means and SD were based on data on the original scale; all analyses were done with appropriately transformed data.

^a Group 1: sperm count: $9.26 \pm 5.54 \times 10^6/\text{mL}$ ($n = 64$).

^b Group 2: sperm count: $73.57 \pm 41.57 \times 10^6/\text{mL}$ ($n = 297$).

^c Significant ($P < .05$) using two-way MANOVA and Bonferroni simultaneous confidence intervals.

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group using cell phones for longer periods of time. When we tried to evaluate the effects of cell phone use within two different sperm count groups (normospermic and oligospermic), we found that the sperm motility, viability, and morphology were still significantly different in subjects using cell phone for less than 4 h/day than those who were using it more. Our initial data have led us to believe that the effect of cell phone use on sperm parameters do not depend on the initial semen quality of the subjects.

In a recent study done by Fejes et al. (9) on 371 men undergoing infertility evaluations, the duration of possession and the daily transmission times of cell phones correlated negatively with the proportion of rapid progressive motile sperm and positively with the proportion of slow progressive motile sperm, although there were no changes in the total motility. Therefore they concluded that prolonged use of cell phones might have negative effects on sperm motility. Davoudi et al. (10), in a prospective study involving 13 men with normal semen analysis, also found that using GSM phones for 6 h/day for 5 days decreased the rapid progressive motility of sperm. The present results are in accordance with these authors, although we found that not only motility but also sperm count, viability, and morphology are negatively affected by the use of cell phones.

In their study on mice, Aitken et al. (12) suggested that radiofrequency EMW might have a genotoxic effect on epididymal spermatozoa, which needs further investigation (12). Contrary to this, Malyapa et al. (17) were unable to find any damaging effects of Code Division Multiple Access phones, with frequency modulation 847.74 MHz, on mouse fibroblasts and human glioblastoma cells. Dasdag et al. (18) also failed to report any adverse effect of cell phone exposure on sperm count, morphology, and histologic structure of testis in rats. However, it is impractical to compare a rat model to

humans because of its small testicular size, nonpendulous scrotum, and the fact that its testis can migrate between the abdomen and scrotum in the inguinal canal (19).

Although the present study suggests the role of cell phones in male infertility, the mechanism of action of EMW emitted from cell phones on male reproductive system is still unclear. Electromagnetic waves can possibly affect reproductive function via three mechanisms: 1) an EMW-specific effect; 2) a thermal molecular effect; or 3) a combination of these (13). Wang et al. (20) suggested in their study on mice that Leydig cells are among the most susceptible cells to EMW, and injury to Leydig cells may affect spermatogenesis. Increase in tissue or body temperature on exposure to EMW may also cause reversible disruption of spermatogenesis (21–23). Electromagnetic wave–dependent decrease in melatonin (5) an antioxidant, can predispose sperm to oxidative stress. Because a negative correlation is seen between sperm motility and sperm chromatin damage (24), and EMW have been shown to effect sperm motility, another possible mechanism of effects of EMW on sperm is DNA damage. Further research is needed to identify the mechanism of action of EMW emitted from cell phones on the male reproductive system.

The present study has a few limitations. We relied only on the self-perceived history of the subjects and did not validate their cell phone use. We did not take into account the occupational history of the subjects and EMW exposure from other sources such as radiotowers, PDAs, Bluetooth devices, computers, etc. We also did not consider the effects of cell phone possession in standby position. Inability to analyze covariates other than age is also a limiting factor. Because each cell phone model has a different specific absorption rate, differentiating between the effects of various models is also important. We are trying to address these issues in a follow-up

study. Nevertheless, the present study has revealed significant findings which pave way for future research in this area.

In conclusion, our results suggest that the use of cell phones by men is associated with a decrease in semen quality. The decrease in sperm count, motility, viability, and normal morphology is related to the duration of exposure to cell phones. These effects may not depend on the initial semen quality of the subjects. More studies are needed to identify the mechanism involved in the reduction of semen quality.

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Submitter Info

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Public Comments on Developing an Unified Inter-carrier Compensation: =====

Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: peggy

Last Name: nicholson

Mailing Address: 404 san francisco blvd #17

City: san anselmo

Country: United States

State or Province: CA

Postal Code: 94960

Organization Name: null

do not discontinue landline phones. it is the only kind of phone i use. the cell phones and cell phone towers are dangerous. you have no right to take my phone away from me and millions of others. as the dangers of cell phones become broad public issue and are understood by more and more people the need for landlines will increase.

we will not rely completely on cell phones for a long long time. if, in the future, cell phones and all that that implies are made harmless, yes. but not now. not now.

please do not do this. thank you.

peggy nicholson

Submitter Info.txt

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Judy

Last Name: Vick

Mailing Address: 9520 Marchant Way

City: Atascadero

Country: United States

State or Province: CA

Postal Code: 93422

Organization Name: null

Do not replace existing landlines with wireless infrastructure until it is proven safe, secure, reliable and affordable!

Landlines are safe.

Children, people with medical implants, people with Radiofrequency Sickness, and people who don't want to increase their risk of cancer can use only landlines.

Research on radiofrequency radiation exposure indicates increased cancer incidence, altered blood glucose levels, weakened blood-brain barrier.

Landlines are secure. Cabled phones ensure privacy.

Using mobile phones makes us vulnerable to hackers who commit financial fraud. It makes us vulnerable to terrorists.

Landlines are reliable.

During power outages and natural disasters, landlines are dependable.

Teleconferencing can be unreliable with broadband connections. Failure to initiate a conference call is a common problem with VoIP (Voice over Internet Protocol) carriers. Teleconference systems often cannot decode the DTMF tones sent by VoIP service providers so that the systems are unable to recognize some of the keys entered for the passcode resulting in failure to initiate the teleconference. VoIP calls are also often dropped midstream.

Wireless telecom equipment can cause disasters. ABC News confirmed on April 26, 2009 that the Malibu, California fires were caused by utility poles overburdened by cellular phone gear.

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Title: Developing an Unified Intercarrier Compensation

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: tamara

Last Name: johnson

Mailing Address: 3207 calle de molina

City: santa fe

Country: United States

State or Province: NM

Postal Code: 87507

Organization Name: null

I can't use wireless devices, it affects my health in really really bad ways. I only use land line devices, I hope the FCC is not seriously considering removing land lines! I am alarmed to hear that this is what is being proposed, god help us if the FCC gets away with this, it'll be the end of my ability to communicate in business or with family.... please don't allow the removal of land lines!! Sincerely, Tamara Johnson

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Marie

Last Name: George

Mailing Address: 303 West Duane Avenue

City: Sunnyvale

Country: United States

State or Province: CA

Postal Code: 94085

Organization Name: null

Do NOT phase out landlines!

Members of my family are electro-sensitive and landlines are our only option.

With the growing number of people becoming electro-sensitive, and the research which is just starting to show health problems with wireless communications--this is NOT the time to consider phasing out landlines!

Submitter Info

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Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: stepehen

Last Name: thode

Mailing Address: 260 N. Main St

City: Imlay City

Country: United States

State or Province: MI

Postal Code: 48444

Organization Name: null

I am writing this letter to tell you that my wife is one of the ten million people who cannot use a cell phone. They make her sick.
WE need our LANDLINES.

Stephen Thode

Submitter Info

Please Do Not Reply To This Email.

Public Comments on Developing an Unified Intercarrier Compensation: =====

Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: elizabeth

Last Name: thode

Mailing Address: 2650 N Main st

City: Imlay city

Country: United States

State or Province: MI

Postal Code: 48444

Organization Name: null

Dear People,

Universal Service is NOT Universal if it excludes 10 million people. I am one of those 10 million people who cannot use a wireless cell phone.

There are ramps on buildings for handicapped people. Restaurants and stores are now "No Smoking". Public schools have tons of programs for special needs children.

There are TEN MILLION PEOPLE like me, in this country, who cannot use a wireless cell phone.

We need OUR LANDLINES.

Elizabeth Thode

Submitter Info.txt

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FR Document Number: 2011-04399

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Richard

Last Name: Pollak

Mailing Address: 3222 Oakridge Ave.

City: Madison

Country: United States

State or Province: WI

Postal Code: 53704

Organization Name: null

I understand that you are planning to phase out landlines over the coming years. This is a serious step, with manifold consequences, some of which cannot be anticipated by any small group of people.

Accordingly, it is important to research those consequences by involving the largest possible subset of the population to weigh in on how such a step would affect them. An essential step in this process is to hold a series of hearings in localities across the country ? including areas spanning the spectrum of population densities ? to gather information as well as poll opinions of such a grave and portentous step.

For myself, I believe that landlines still (on the whole) provide the best and most consistent voice quality and the lowest cost. It is premature, in my opinion, to sacrifice these advantages before alternative transmission methods have matured to the point where they are comparable in cost-effectiveness and raw quality. I do own a cell phone (and pay for two more lines as well), for the obvious advantages of mobility. But I also have a landline, and intend to retain it until all of the advantages are on the side of the competing technologies.

COMPETITION IS HEALTHY. DO NOT DISMANTLE IT IN THE CORE AREA OF PHONE SERVICE(!!!)

Sincerely,

Richard L. Pollak

Submitter Info.txt

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Teresa

Last Name: Paine

Mailing Address: 1152 Triangle Rd.

City: Bluefield

Country: United States

State or Province: VA

Postal Code: 24605

Organization Name: null

I am a Licensed Professional Counselor with a private practice in my community. In order to maintain my practice I have to be able to use the telephone. Like most people I also use the phone to keep in touch with my friends and family and to make many practical calls that are absolutely necessary at home and at work.

I suffer from electromagnetic sensitivity. I am completely unable to use a cell phone and I have to limit my use of the computer. Whenever I use a cell phone I suffer from excruciating migraine headaches so I simply never talk on a cell phone.

I understand that the FCC believes the current telephone system is obsolete and that the phone lines and switching centers need to be dismantled. I also understand that the FCC is taking actions that will cause ordinary phones to be replaced with computers and cell phones. If this takes place I will not be able to continue to maintain my practice and will be unable to make a living. I will also be unable to have the most basic phone service so I will be virtually cut off from my loved ones and from using the phone for all of the practical day to day uses that are required to survive in today's world.

There are many other people in this country who share this problem with me. In fact, I understand that there are at least 10 million people who would share my fate if you eliminate the landline telephone system.

Children's brains are particularly vulnerable to the damage that many believe cellphones cause. This move would mean that children would be forced to use cellphones which is a risky policy for a government agency to pursue.

I urge you to continue to support the landline system for these reasons.

Sincerely,

Teresa S. Paine, PhD, LPC

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Melodie

Last Name: Chrislock

Mailing Address: 26235 Atherton Place

City: Carmel

Country: United States

State or Province: CA

Postal Code: 93923

Organization Name: null

Landlines and the switched telephone network must be maintained. I use mine all the time and do not want to be forced to put a cell phone up to my head. No thanks!

The radiation from all out cell phones is already suspected to be causing harm. It is absolutely premature and short sighted to get rid of our only alternative....landlines.

Melodie Chrislock

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: John

Last Name: Whiffen

Mailing Address: 5815 Clover Heights Avenue

City: Malibu

Country: United States

State or Province: CA

Postal Code: 90265

Organization Name: National Physicians Center

Dear Sirs:

I understand that you are considering eliminating land line telephone service. While I understand that might save money for some, there are many people in this country who have electromagnetic sensitivity and are unable to use wireless devices such as cell phones. My wife is one of those. For this reason I am asking that you do not eliminate the hard wired telephone service. Here in Malibu, cell phone service is so poor that most of us could not rely on it even if it did not cause health problems.

Thank you,

John R Whiffen, MD

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: L

Last Name: Anderson

Mailing Address: 950 Emerald St.

City: San Diego

Country: United States

State or Province: CA

Postal Code: 92109

Organization Name: null

Please do not end the use of landlines since people such as myself cannot handle cell phone EMF and many others are documented to have developed brain tumors from cell phone use. Please see the website: www.CellTowerDangers.org for scientific evidence that supports the fact that microwave radiation is harmful to humans. Funding fiber optics and using landlines are the recourse to poisoning humans with ever-increasing radiation from multi G cell networks.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: KT.

Last Name: Eckardt

Mailing Address: 1381 Cedar St.

City: San Carlos

Country: United States

State or Province: CA

Postal Code: 94070

Organization Name: Eckardt & Associates

RE: FCC proposal - Developing an Unified Inter-carrier Compensation -
FCC-2011-0078-0001

I was driving in San Carlos with SF power station KGO on and I had such interference to deafen me. All the wireless is making radio reception impossible.

They state that smart meters are safe when no effect is known sometimes for 20-30 years. EMF's are a known danger, buried by governmental departments.

...assinine, suicidal, entropic march of man.

LANDLINES, THANK YOU.

SMART METERS - NO!

WIRELESS, NO LANDLINES - NO!!!!

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Jackie

Last Name: Wahlig

Mailing Address: 911 W. Theresa Ln.

City: Glendale

Country: United States

State or Province: WI

Postal Code: 53209

Organization Name: null

I am distressed that you would even think of eliminating Land Lines. Are you aware that many people would be without a way to communicate by telephone without their Land Lines? The disabled, elderly, have physical limitations. I would be one of those people who would have no phone

. I cannot physically hold a cell phone up to my head nor can I have one in my ear. My hands do not work right, my arms do not work right due to neurologic muscle weakness, degenerative disc disease in my neck, cramping in my hands. It does not work for me. In addition to that I cannot be on a cell phone for too long without getting tremors, headaches, etc. The large old fashioned phone I use I can balance the receiver on my neck/shoulder. Please do not take away our only way of using the phone - our Land Lines.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Phyllis

Last Name: Goetz

Mailing Address: 24 Roe Circle

City: Monroe

Country: United States

State or Province: NY

Postal Code: 10950

Organization Name: null

It would be disastrous to mandate that the U.S. do away with landline phones. The proliferation of cell phones has created a most serious health problem in this country, and we are on the brink of a major brain tumor and cancer epidemic because of the radiation produced by magnetic fields that wireless electronics generate. Particularly at risk are children.

Here are valid findings to illustrate:

*the European REFLEX studies in 2000 found deleterious biological effects from cell phone radiation

*the German company T-Mobile did a survey of existing literature finding negative consequences to cell phone use

*the Austrian reinsurance industry refused to reinsure wireless companies after finding decreased test performance by adults who used a cell phone for a couple of hours and irregularities in test tube samples of blood exposed to cell phone radiation

*Appendix 2 of the WHO INTERPHONE Report released in April, 2010 links 10 years of cell phone to a doubling of gliomas

*the UK and Israeli governments have informed the public not to abandon their landlines; Israel recommends corded landlines and not portable phones (which emit microwave radiation).

*major scientists including David Carpenter of the Presidential Cancer Panel, Devra Davis, founder for the Center for Environmental Oncology, Lloyd Morgan of the Central Brain Tumor Registry say that we are at the beginnings of a major brain tumor and cancer epidemic from cell phones

* studies link cell phone use to gliomas, meningiomas, acoustic neuromas, parotid gland tumors, tinnitus, sperm count drops, testicular cancer, decreased performance on tests, cognitive processing problems including but not limited to ADHD.

*the WHO acknowledges that 3% of the world population suffers from electrohypersensitivity and cannot tolerate proximity to cell phones, cell towers, wi-fi and other forms of electromagnetic pollution.

FCC .. You have a responsibility to safeguard the American public

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FR Document Number: 2011-04399

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Margaret

Last Name: Hager

Mailing Address: N2827 Dusty Lane

City: Cascade

Country: United States

State or Province: WI

Postal Code: 53011

Organization Name: null

Switch telephone network must be maintained. Is our country so far behind the ball that it does not recognize the electrically sensitive population of our country? Please curb the ignorance by educating yourselves. Children, our countries greatest assets, are some of the most vulnerable. They will be the ones trying to live in the "future environment" you are now creating. Please take the information on the dangers of a wireless society as seriously as the dangers of carbon monoxide. Both are colorless, odorless and yet deadly.

Look, Feel and Listen.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Jessica

Last Name: Prentice

Mailing Address: 5706 Van Fleet Ave

City: Richmond

Country: United States

State or Province: CA

Postal Code: 94804

Organization Name: null

I am very concerned about wireless technology and the potential health impacts on all of us. This is a very new, very untested technology and we should have the option to protect ourselves from it. At the very least, we need to preserve the right to land line service for phone and modem.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Cate Leger

Last Name: Leger

Mailing Address: 2320 McGee Ave

City: Berkeley

Country: United States

State or Province: CA

Postal Code: 94703

Organization Name: null

The FCC proposal to eliminate many telephone landlines would profoundly impact the nation. Citizens need much more opportunity to discuss the issue and create regulations that protect our population and our environment as new technologies are introduced to our society.

Citizens must be allowed the choice to keep landline phones. Landlines are safe, secure, reliable and affordable. Mobile phones have not been proven safe.

The FCC's duty is to facilitate communications for the whole country. Its new proposal ignores issues of health, safety, privacy, affordability and security.

Because of the rapid deployment of wireless telecom services, citizens, mayors, city legislators and city staff in every community in the United State are struggling to appropriately site the infrastructure for this technology while protecting the environment and the public's health.

The FCC's proposal values wireless telecom services more than our city and state charters, the Americans with Disabilities Act, and the Constitution. It promotes the interests of telecom corporations over citizens' health and safety. Because so few city attorneys, planners or legislators have been trained in telecom law or in regulating wireless telecom equipment, there are now thousands of lawsuits around the U.S. between municipalities, citizens groups and telecom companies.

As the FCC has stated, it does not have the expertise to determine safety standards for exposure to radiofrequency radiation. No government agency studies the biological effects of continuous exposure to radiation from wireless devices and antennas. The FCC's new proposal fails to outline how wireless infrastructure will be monitored and regulated. It relies entirely on voluntary compliance from the telecom industry.

Citizens have the right to choose a landline phone. We have the right to opt out of wireless devices. If the FCC's proposal passes, we will be denied the right to choose a landline.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: E. A.

Last Name: Boccella

Mailing Address: P. O. Box 5233

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87502

Organization Name: null

Eliminating land lines is a terrible idea. I rarely use a cell phone due to EMF sensitivity. This would be a nightmare for myself and the many others who have EMF sensitivity!

Please Do Not Reply To This Email.

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Ciri

Last Name: Johnson

Mailing Address: 2952 W Avenida Cresta

City: Tucson

Country: United States

State or Province: AZ

Postal Code: 85745

Organization Name: null

Do not replace existing landlines with wireless infrastructure!

Landlines are safe.

Children, people with medical implants, people with Radiofrequency Sickness, and people who don't want to increase their risk of cancer can use only landlines.

Research on radiofrequency radiation exposure indicates increased cancer incidence, altered blood glucose levels, weakened blood-brain barrier.

Many in the public cannot use any cordless or wireless phone without developing headaches that are often severe.

Landlines are secure. Cabled phones ensure privacy.

Using mobile phones makes us vulnerable to hackers who commit financial fraud. It makes us vulnerable to terrorists.

Landlines are reliable.

During power outages and natural disasters, landlines are dependable.

Teleconferencing can be unreliable with broadband connections. Failure to initiate a conference call is a common problem with VoIP (Voice over Internet Protocol) carriers. Teleconference systems often cannot decode the DTMF tones sent by VoIP service providers so that the systems are unable to recognize some of the keys entered for the passcode resulting in failure to initiate the teleconference. VoIP calls are also often dropped midstream.

Wireless telecom equipment can cause disasters. ABC News confirmed on April 26, 2009 that the Malibu, California fires were caused by utility poles overburdened by cellular phone gear.

Landlines are affordable.

We already have the infrastructure for landlines.

Mobile phones fees are unregulated.

Mobile phones and computers need constant repair, upgrades and replacement. Seniors and low-income citizens can't afford this. Equipment for landlines is durable and economical.

Landlines are easy to use.

Imagine people with Alzheimers or other dementia trying to learn how to initiate computer calls.

The FCC has the duty to facilitate communications for all citizens.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Nancy

Last Name: Frank

Mailing Address: E3602 1450th Avenue

City: Ridgeland

Country: United States

State or Province: WI

Postal Code: 54763

Organization Name: null

I urge you to leave choice in place regarding land lines vs. cellular communication devices.

Other countries have followed the advice of professionals, and have responded to the actual data of symptoms of malaise among groups of people who are working or learning under direct radiation of the towers that are required for mobile/wireless communication.

Unfortunately, our country, to a greater extent with each passing day, is responding only to profit margins, and not to the health of its citizens.

I am one of the people who is electrically sensitive, and have symptoms when a cellular device is used in close proximity to me. If all communication were done wirelessly, I would be at a tremendous disadvantage, and would not be able to work or do many of the things I currently can.

Please do the right thing, for the right reasons.

Thank you,

Nancy Frank

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Amanda

Last Name: Rose

Mailing Address: PO Box 584

City: San Luis

Country: United States

State or Province: CO

Postal Code: 81152

Organization Name: null

I am among a growing percentage of the population that is negatively impacted by wireless networks and cellphones. The problems that arise are many - cancer, severe headaches, digestive difficulties, heart issues, slowing of brain function and seizures - to name a few that arise. It is imperative for those of us with this disability that land lines for phones and DSL remain available.

The research on this issue is readily available and is worthy of your attention. I most sincerely hope that the FCC will educate itself on this important issue before making any decisions.

Thank you for your time and attention to this important issue. I am certain that in the foreseeable future there will be a much larger portion of the population that will be suffering with this disability, just as cigarette smoke has become more of a problem over time.

Submitter Info

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Michelle

Last Name: Labissoni

Mailing Address: 1022 22nd Ave NE

City: Minneapolis

Country: United States

State or Province: MN

Postal Code: 55418

Organization Name: null

As a citizen of this oh so wonderful nation who are making such great changes for us all. I do not want the land lines for telephones ever taken away! Elderly people NEED THEM, many times in life or death situations. As anyone must know what happens when disasters big or small occur, cel phones can and do go down. Many people cannot afford a cel phone, we use land lines for so many things! No everyone wants to sleep with a cel phone on, and move it around the house with them they can get the phone. This regulation would affect so many people adversely for reasons I am sure you know. What is the reasoning? Is someone wanting to invest in some new phone company? That is the only thing I can think of.

When the power goes out, my phone is all I have to call, I don't have internet at that point, or TV. Or radio sometimes. I can only call the company via phone. A cel phone has to be constantly uploaded for those of us who pay as we go.

Every time we lose a phone, if we have to change numbers, we have to change it in all our accounts everywhere, unless the govt.s plan is to keep track of individuals better and assume a number never needs to change with each new phone. Like a tracker. That is likely the reasoning, if so. I beg it not to happen. These changes are getting way out of control. Adversely affecting those who are poor, elderly, mentally challenged, and also everyday people who don't want to use cels due to the electric fields. We have a right to these things. Please consider the ramifications and adverse changes to peoples lives this would have. It is not fair to US citizens. I would vote against it. I want my landline always available to me. Thanks for listening.

Submitter Info.txt

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Public Comments on Developing an Unified Inter-carrier Compensation: =====

Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: rhonda

Last Name: hoefs

Mailing Address: po box 2744

City: aptos

Country: United States

State or Province: CA

Postal Code: 95001

Organization Name: null

This is my second attempt. My first, perfectly acceptable comment was not allowed to reach you.

Studies from Europe and leading medical doctors in the U.S. have shown that land line phones are FAR safer than wireless systems. They are also more secure in every way.

Every day more and more people are becoming emf sensitive, including children with increasing rates of attention deficit disorder and autism.

If land line phones are taken out many many people will be forced to go on disability because they will be unable to make a living or just go about normal business duties. Since they will be unable to work or live in the increased wireless environment they will have to collect disability which will strain our already bankrupt system.

People should have choice. No one wants to live in a completely wi-fi zone. Europe has been cutting back, as their studies continue. We should be doing the same. This decision is about greed.

Wireless phones will be no more stable than land lines. It is less work for the phone companies (they believe) but at the expense of our health.

I, for one, will not be using any of the proposed phones. And I will be recommending that no one does.

Rhonda Hoefs emf safety network

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Linda

Last Name: Gabrielson

Mailing Address: 31 Crandall Rd

City: Monterey

Country: United States

State or Province: CA

Postal Code: 93940

Organization Name: null

NO, I do NOT want to eliminate wired, land-line phones in the United States! My house in Rural Mendocino Co. does not receive cell phone transmission, cable or broadband internet services. Landline connection is our only reliable communication in case of emergency or power outage. Also, I have worked with individuals with disabilities for 30 years. Cell phone use is not successful and or can be health issues for many of these folks.

Please reconsider this blanket proposal.

Thank you.

Submitter Info.txt

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Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Barbara

Last Name: Doebele

Mailing Address: 1414 Martway Circle Apt D

City: Olathe

Country: United States

State or Province: KS

Postal Code: 66061-5811

Organization Name: null

I am an individual who is concerned about the possibility of losing Land Line Phone Service. I get severe headaches from electronic (battery operated) phones. I have tried several and have not found any that are suitable for my situation. I have a non-battery land line phone that gives me no problem.

If land line phones are discontinued, I will have no contact with the outside world in case of any emergency. I will lose contact with family and friends.

I cannot afford the cost of extra computer services, other than very basic, minimal service. I have a social security income of \$350 per month.

I have no documents to attach. I hope you will listen to the plea of one person to keep land lines available.

Thank You.

Barbara Doebele

Olathe KS

barbj ojim3@yahoo.com

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Public Comments on Developing an Unified Intercarrier Compensation: =====

Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Tobie & Ellen

Last Name: Cecil

Mailing Address: 3350 Del Monte Blvd., #H-1

City: Marina

Country: United States

State or Province: CA

Postal Code: 93933

Organization Name: N/A

Dear Sir or Madam, We do not want telephone landlines to be phased out in America. Landlines are: Safe; Secure; Reliable; Affordable; Easy to Use; and Green. We have the right to choose a landline and to opt out of wireless devices. People with medical implants or sensitivity to Radiation Frequency do not want them. Risk of cancer from cell phones is possible. Wireless phones can alter blood glucose levels and weaken the blood-brain barrier. Some people get headaches from using cell phones. Mobile phones make people vulnerable to hackers but landlines are not as easy to hack. When the power goes out, landlines are Old Reliable and cell phones are not. Landlines have the infrastructure in place already and are durable and economical. People with Alzheimer's or dementia find landlines easy to use but not so with cell phones. Landlines are "green" but cell phones require increasing cell towers and antennas plus recharging at frequent intervals. Please continue our American rights to have landlines for telephone use! Thank you, The Cecils

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Robert

Last Name: Sternberg

Mailing Address: 207 Ocean Parkway

City: Bklyn

Country: United States

State or Province: NY

Postal Code: 11218

Organization Name: noneT

The switched telephone network must be maintained!

I am taking care of a woman who is severely disabled byYo
electrical sensitivity. She cannot use a computer. She can-
not use a cell phone. The only way she can communicate
is with a landline. You must not take her right away for
the benefit of the wireless industry!! She needs to be
able to make a call on a landline. If you take this away,
what will she do? The FCC should be protecting people
not taking away the rights of the disabled from this
very technology!!

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Barbara

Last Name: Trypaluk

Mailing Address: 211 Circular St.

City: Saratoga Springs

Country: United States

State or Province: NY

Postal Code: 12866-2326

Organization Name: null

I'm against the phasing out of landline phone service. I don't like cell phones because the reception is usually worse than with landlines. Cell phones have also been proven to pose a health risk. People with medical implants, radio frequency sickness, and those who don't want to run the risk of getting cancer can now use landlines. Landlines are much more reliable than cell phones. They are more affordable and easier to use and don't have to be recharged.

I believe the FCC has a duty to facilitate communication for all its citizens. That means no one should be forced to use a cell phone. Everyone in the U.S. should have the freedom to choose between landlines or cell phones. The infrastructure for landlines is already in place -- that's not true for cell phones. Leave our landlines alone and stop complicating everything for the sake of more profits for the cell phone companies!!

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Donna

Last Name: Jaffe Fishbein

Mailing Address: 1110 Barcelona Lane

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87505

Organization Name: null

After watching what has happened in Japan when telecommunications broke down, one can see that there is value in diversification in the communications systems. That diversity provides options to people, especially those who are sensitive to wireless devices, as well options in the event that the unified system would break down, be faulty at some point in some way, or have an unforeseeable side effect which could be detrimental to the few or the many.

Diversification - whether in agriculture, financial investment or telecommunications - seems like a healthy thing. I am not religious though I do think of the Tower of Babel. Putting all our eggs in one basket seems dangerous, especially when the technology has not yet proven itself. Furthermore, diversity makes us less vulnerable - in that, it is more difficult to knock out our telecommunications system if there is more than one method of connection.

I use my land line still. I would like to continue to use it.

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Edna

Last Name: Hoover

Mailing Address: GPO Box 022951

City: Brooklyn

Country: United States

State or Province: NY

Postal Code: 11202-0060

Organization Name: Adult Education

Cellphones are hazardous to human health & toxic to our environment. We need our
landlines!!!

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Dori

Last Name: Dalton

Mailing Address: 9 Cimarron Pass

City: Santa Fe

Country: United States

State or Province: New Mexico

Postal Code: 87508

Organization Name: null

I do not want to see landline phones eliminated. Cell phones are not the answer for the masses. While cell phones have vastly improved over the years, they still aren't quite at the level of reliability that landlines offer. Pick up a landline phone and unless a hurricane is blowing through, you're going to get a dial tone. This is not always the case with a cell phone. There may also be an issue of contacting emergency 911 services if you happen to be ill. If you call from a landline phone, the 911 operators can locate you even if you can't speak, which may not be true with a cell phone. I happen to live in a "dead zone," meaning I can not make a call using my cell phone, nor can I receive calls. However, I would not support the placement of a cell tower in the area. It has been proven in Europe that people living near these towers have a significantly higher percentage of cancer. And the jury is still out on the effects of cell phones on our health and the health of the environment. Plus I resent being forced to use something that I don't like in the first place.

Submitter Info

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Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Ann Louise

Last Name: Gittleman

Mailing Address: 1928 East Rodkey Drive

City: Post Falls

Country: United States

State or Province: ID

Postal Code: 83854

Organization Name: First Lady of Nutrition

To Whom It May Concern:

There are a growing number of individuals in this country who are sensitive to electromagnetic radiation from cell phones, cordless phones, and Wi-Fi. The latest JAMA study of February 23, 2010, which shows that cell phone radiation impacts brain metabolism, was corroborated by researchers from the University of Zurich back in 2002. Studies by Henry Lai, Ph.D. and Martin Blank, Ph.D. confirm that cell phones impact DNA and elevate heat shock proteins.

As an electrosensitive individual, I can empathize with the current population who are electrohypersensitive and suffer from headaches, dizziness, nausea, and sleeplessness caused by digital devices. Experts believe that up to 35% of the population is already hypersensitive.

I implore you to leave the landlines intact.

Yours,

Ann Louise Gittleman, Ph.D., CNS

Author of Zapped

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Therese

Last Name: Junttonen

Mailing Address: 2339 Forest Ave.

City: Durango

Country: United States

State or Province: CO

Postal Code: 81301

Organization Name: null

This strikes me as an unseemly rush to a conclusion before (1) taking into depthful consideration existing research (for example, the Bioinitiative Report dated August 31, 2007; and (2) conducting true, in-depth research on the effects of electromagnetic energy on human beings AND animal and plant life. The harmful effects of sonar on marine life in water is known (in large parts thanks to the Navy). Why would we rush to conclude that there are not similar effects on living organisms (or possibly simply more subtle, longer term effects) via the impact of electromagnetic energy? Is it simply coincidence that the sharp rise in electromagnetic usage roughly matches timing re: declining bee/butterfly/frog populations, instances of birds falling dead out of the sky for unknown reasons (for example, in Austin, TX), etc.? At best, we simply DO NOT YET KNOW. At worst, there is a connection. Where is the long-term research before leaping to conclusions and passing legislation like this? Please rethink this untimely legislation.

Submitter Info.txt

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Christine

Last Name: Pasciuti

Mailing Address: 234 Dutch Hill Road

City: Oneonta

Country: United States

State or Province: NY

Postal Code: 13820

Organization Name: null

To: Office of the Secretary, FCC

Please consider the importance of maintaining telephone landlines (the switched telephone network).

The possibility of loss of electricity over broad areas for longer periods of time is increasing. The intensity of natural disasters have proven so in other parts of the world, as have infrastructure vulnerabilities. We need to have a reliable source of communication should such an interruption of electrical services occur. The decision to eliminate such a vital core and back-up communication system should not be made without strong consideration of how effective landlines will be during a real and potentially lengthy emergency involving loss of electrical power and other life-supporting services.

An estimated 3% of our nation's population (10 million Americans) suffer from electromagnetic sensitivities. Given the increase in exposure to radiofrequency wireless radiation - with multiple devices now being used in most homes - a significant and growing number of people will suffer unnecessary isolation and health risks, if the landline option becomes obsolete.

I respectfully and strongly urge the FCC to keep and maintain the switched telephone network, and to adequately fund it, by not diverting existing subsidies to broadband.

Thank you.

Christine Pasciuti

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Carla

Last Name: Johnson

Mailing Address: 107 West Broadway

City: El Dorado Springs

Country: United States

State or Province: MO

Postal Code: 64774

Organization Name: null

Please do not allow the elimination of landline telephones. This would cause great hardship for the ever-increasing number of people (around 10 million presently) who cannot tolerate cell-phones because of their electro-magnetic waves. Most of them already cannot use computers, and if we take away landline telephones, they will be disenfranchised!

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Cynthia

Last Name: Price

Mailing Address: 4923A Sperryville Pike

City: Woodville

Country: United States

State or Province: VA

Postal Code: 22649

Organization Name: null

I previously submitted a comment asking that landline phone service not be phased out with all my reasons, but was timed out and told to hit the "OK" button, which I did...I do not know whether or not the comment even went through. WHY are you timing people....shouldn't they have time to think about their comments???????

Basically, I think microwaves are dangerous, from a lot of research/experience I have done/had, and that cell phones, besides being profitable and a good way to monitor people, serve no purpose but to keep the public sick, the air poisoned, and the constitution gutted. This goes for smartmeters (dumbmeters), cell phone towers, wifi computer service, microwave in public places, naked xrays at airports, and other indignities, spy devices (satellites) and profit enabling items pushed by unscrupulous people who are lying to the public. Public phones have been removed, landline service cut to the bare minimum, including removing 4-wheel drive trucks so farms and small roads cannot be serviced in bad weather, and wireless everything pushed and forced on everyone, even though the traditional use of microwaves has been for weaponry, for which they are still used today. This is not life, liberty and the pursuit of happiness, but sickness & death, slavery & license (unlimited exploitation).....a real hell on earth, except for those who get off on these things. Why should a person in an outage out in the country wait 3 weeks to even be able to get an appointment with a technician???? That is extremely dangerous. I am opposed to all subsidies for broadband and wireless, and all attempts to make landlines, anything wired, and anything healthy extinct. You are not, and never have been "green", much less concerned with the public welfare. This comment period on this proposed bill was not even announced to the public!!!!

Instead of sneering at people at the FCC, why don't you hire some honest, unconnected people to start running things, and really do

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Azlan

Last Name: White

Mailing Address: PO Box 9012

City: Santa Fe

Country: United States

State or Province: CA

Postal Code: 95461

Organization Name: null

I cannot use a cell phone. I can only use a land line. I am too sensitive for microwave-based phones. Eventually, it will be known that microwave cell networks are hazardous to humans and nature. Land lines are safer! Please be wise and allow us to keep land lines for those of us who prefer and choose landlines over cell networks. Most people I know prefer to use a land line than to radiate their brains with microwaves while talking!

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Christine

Last Name: Weeber

Mailing Address: 530 Creekwood Trail

City: Black Hawk

Country: United States

State or Province: CO

Postal Code: 80422

Organization Name: null

Please maintain the switched telephone network. I am one of approximately 10 million Americans who become ill when using a cell phone. I am sensitive to electromagnetic fields. I have a cell phone to use when I travel, in case of emergencies, but I cannot use it on a regular basis. It causes headaches, my ears ring, and I get sharp pains across my face. I MUST be able to use the telephone network for voice communication.

PLEASE READ THE EMERGING EVIDENCE RE: CELL PHONE USE AND HEALTH. "Devra Davis found evidence of studies, some decades old, showing that the radio-frequency radiation used by cell phones could indeed have biological effects?enough to damage DNA and potentially contribute to brain tumors. She found that other countries?like France and Israel?had already acted, discouraging the use of cell phones by children and even putting warning signs on handsets. She found evidence of increases in certain kinds of brain tumors among unusually young patients who were heavy users of cell phones. And, just as she saw with tobacco and lung cancer, Davis discovered that the wireless industry?often with the help of governments?had fought independent scientists who studied cell phones, and helped produced questionable science that effectively clouded the issue. "This is about the most important and unrecognized public health issues of our time," says Davis. "We could avert a global catastrophe if we act."

Read more:

<http://ecocentric.blogs.time.com/2010/09/27/health-a-cancer-muckraker-takes-on-cell-phones/#ixzz1JjbQx82b>

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Virginia

Last Name: Rosen

Mailing Address: 59 Green St., #303

City: Malden

Country: United States

State or Province: MA

Postal Code: 02148-7449

Organization Name: null

Dear FCC,

Please maintain land phones: "switched telephone network".

I have Multiple Chemical Sensitivity (MCS).

Electromagnetic fields interfere/exacerbate this condition.

I have a land phone only. No computer. This message is being generated at a library.

Please reconsider the effect your proposal has on the health, well-being and economy of those, like myself, who require the telephone to communicate with our world... Safely.

Thank you in advance for the healthy choice to maintain land phones.

Virginia M. Rosen, RN, BSN, HNB-BC

For information on MCS:

www.chemicalsensitivityfoundation.org

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Roy

Last Name: Culver

Mailing Address: 1618A Ward St

City: Berkeley

Country: United States

State or Province: CA

Postal Code: 94703

Organization Name: null

FIRST OF ALL, a longer comment period!! for this item is essential. You seem to not care to hear from the public if you do not extend the comment period -- as you must be aware, most people have no idea that dismantling the landline system is even being considered.

Citizens should have the right to choose a landline phone and the right to opt out of wireless devices.

We already have brain tumors here and don't want to increase our risk of cancer.

Do not replace existing landlines with wireless infrastructure until it is proven safe, secure, reliable and affordable! Safety is not proven until your obsolete standards go beyond the thermal effects.

Children should only use landlines; people with medical implants can only use landlines.

Research on RF exposure indicates increased cancer incidence, altered blood glucose levels, weakened blood-brain barrier. If independent research received any funding in the public interest, we would no doubt know a lot more about serious health effects.

Several people I know cannot use any cordless or wireless phone without getting terrible headaches that last hours or days.

Mobile phones and computers need constant repair, upgrades and replacement. Good for business, yes. Terrible for the public who need something affordable and reliable in an emergency.

Landlines are secure, reliable, affordable, easy to use, require minimal power,

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Sandra

Last Name: Chianfoni

Mailing Address: PO Box 755

City: Monterey

Country: United States

State or Province: Massachusetts

Postal Code: 01245

Organization Name: null

Land lines continue to be lifelines, despite the federal agency's attempt to do away with them. During emergencies, tiny, fragile cellphones can be easily lost or broken, and they need to be recharged - not possible when the power is out. During natural disasters, when cellphone service may be uneven, land lines can help emergency personnel know your location. Even cellphone companies rely upon landline systems in such times to complete calls, route calls and connect their towers to the national network.

People with disabilities such as EHS are discriminated against by taking away land lines.

The idea of this even being proposed when the jury is still out on proving or disproving the harm non ionizing radiation exposure potentially may have on Americans is a grave disservice and a reckless irresponsible one as well.

This would also force children, especially to depend solely on the cell phone, when it is recommended in some countries warn their citizens against children using cell phones until a certain age. Now that cell phones are more than just a cell phone and have become a computer; people will not use these devices moderately. Parents can not monitor their children 24/7 to ensure moderate use.

This action will add to the continuing stripping of our Human Rights so that Corporate America can profit.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Kata

Last Name: Orndorff

Mailing Address: 3501 N Country Club Rd. #D

City: Tucson

Country: United States

State or Province: AZ

Postal Code: 85716-1268

Organization Name: null

RE: FCC proposal - Developing an Unified Inter-carrier Compensation -
FCC-2011-0078-0001

Landline service is absolutely essential to many people and must be preserved.

There is a portion of the populace who cannot use wireless technologies due to health constraints, especially those like myself with electromagnetic sensitivities. This prevents them from using the cellular phone system. These people rely exclusively on the landline switched telephone network for voice communication.

Removing landline service would deny these people access to phone service, a fundamental and essential right and resource. This would also constitute a serious violation of the Americans with Disabilities Act (ADA). In light of these facts, it is clear that elimination of landline service should be prohibited.

For a brief review of pertinent information regarding those with environmental sensitivities, please visit the U.S. Architectural and Transportation Barriers Compliance Board (Access Board) at
<http://www.access-board.gov/research/ieq/intro.cfm>

Regards

Kata Orndorff,

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Judy

Last Name: Spalt

Mailing Address: 1123 E. Timber Ridge Road

City: Prescott

Country: United States

State or Province: AZ

Postal Code: 86303

Organization Name: None - Private Individual

I am very strongly opposed to the dismantling of the switched telephone network. Many individuals with disabilities have electromagnetic sensitivities (3% of Americans according to the Access Board). All of these individuals cannot use wireless technology. They depend on the switched telephone network for voice communication. Eliminating landlines will leave millions of Americans without basic telephone service. In a country as developed as the U. S., this is NOT an acceptable option.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Layna

Last Name: Berman

Mailing Address: P.O. Box 460

City: Camp Meeker

Country: United States

State or Province: CA

Postal Code: 95419-0460

Organization Name: Your Own Health and Fitness

I and my co producer Dr. Jeffry Fawcett are health educators, and syndicated radio journalists. We have been covering the health affects of wireless or radio frequency for the last twelve years. After interviewing researchers and public health policy makers across the globe, we are convinced that exposure to these technologies impart harm. We hear from hundreds of electro-sensitives who have become too ill to work because of increased exposures that they can't protect themselves from. Many citizens need a choice about exposure to wireless including broadband.

The switched telephone network must be maintained!

The Architectural and Transportation Barriers Compliance Board ("the Access Board"), is the federal agency that administers the Americans with Disabilities Act.

According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities

(<http://www.access-board.gov/research/ieq/intro.cfm>). They cannot use wireless

technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if

it excludes 10 million people. Eliminating landlines will leave millions of

Americans without even basic telephone service.

Please do not allow telecommunication companies to eliminate land line service or to charge more for basic service!

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Miriam

Last Name: Ganley

Mailing Address: 100 Via Vinca

City: Santa Cruz

Country: United States

State or Province: CA

Postal Code: 95060

Organization Name: null

We live in an area where it is difficult to receive cell service. This would put those who are in similar situations in an unsafe environment when there are emergencies either to the environment- i.e. forest fires, winter tree or water hazards, family emergencies.

In addition, several cell phone studies have recently been published and acknowledged by the medical profession that it is unhealthy to use cell phones for a long period of time. Those who have children that use cell phones for communication will be putting themselves and the children at risk.

Lets keep this a healthy nation.

As a retired special education teacher, I can attest to damage to children from environmental hazards.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: margaret

Last Name: tobin

Mailing Address: 40 First Ave #2E

City: New York

Country: United States

State or Province: NY

Postal Code: 10009

Organization Name: null

During the last electricity black out, only landlines worked -- no other form of phone service was available. What about an emergency in such a situation? How can we call 911 without any phone service.

I have both a landline and a cell phone. My landline has never dropped a call. My cell phone does occasionally. The quality of sound on my landline is poor only when someone is calling me from a cell phone.

We do not know the effect of the increase in electromagnetic fields with such increased cell phone activity. More and more areas will require cell phone transmission towers (many parts of the U.S. have no cell phone service at present so there will be a considerable increase in these structures). There are theories, so far neither proved nor disproved, that constant cell phone use may be harmful to human health.

For people with problems such as poor eyesight or arthritis, cell phone use can be extremely difficult if not impossible.

How can you even think of such a thing?

Submitter Info.txt

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Public Comments on Developing an Unified Inter-carrier Compensation: =====

Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Doreen

Last Name: Teodorson

Mailing Address: 9 Hilltop Road

City: Scituate

Country: United States

State or Province: MA

Postal Code: 02066

Organization Name: null

I was exposed to a cell tower transmitter box about the size of a tractor trailer above my head at work at the town hall in Weymouth, MA for about 3 years. I now have MS like symptoms and am considered electrosensitive. I have lesions on my brain and cannot get near servers at work or transformers of any kind or parts of my body start to 'numb out'. I cannot use a cell phone or a wireless phone at home. I have to use the wired phone.

Before this incident, I was perfectly healthy. Now I suffer daily with multiple symptoms.

Sincerely - Doreen C. Teodorson

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Linda

Last Name: Rozen

Mailing Address: 3566 Palladian Circle

City: Deerfield Beach

Country: United States

State or Province: FL

Postal Code: 33442

Organization Name: null

I need the land line because FPL would not give me a smart meter because I asked a question that they could not answer.... My question : is a DBS(Deep Brain Stimulation) medical implant device compatible with a wireless smart grid once the smart grid is up and running with all the appliances attached with antennas and the outside security in place? FPL has spent nine weeks looking for an answer and meanwhile they have sent me a letter that states that they know I have a unique medical condition so that is why they did not install a smart meter on my home. There are 25 million of us with medical implants so until a wireless meter is proven to be safe it should not be installed anywhere. What would you do if you lived in a wireless smart meter home and you had to have a pacemaker and you could not live in your house because the smart meter made it unsafe?

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: nancy

Last Name: clough

Mailing Address: 511 garfield ave

City: carbondale

Country: United States

State or Province: CO

Postal Code: 81623

Organization Name: null

I am very opposed to discontinuing land lines for telephones. I do not use a cell phone, and cannot use one, except for very short infrequent moments. I find that many times cell phone calls are dropped, so I am not able to return calls that have been made to me. To completely rely on technology that has electromagnetic energy will only add to the sicknesses that are being finally documented relating to wifi and cell phones. Please do not support the discontinuation of land line telephones.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: John

Last Name: McMurtrey

Mailing Address: 903 N. Calvert St.

City: Baltimore, MD

Country: United States

State or Province: MD

Postal Code: 21202

Organization Name: null

Any FCC ruling to eliminate land lines is evil, ignorant, and paid off by the usual Republican special interests. Radio frequencies are known unsafe, but just how unsafe is unknown.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Victoria

Last Name: Spearow

Mailing Address: 18002 Java Isle Dr

City: Tampa

Country: United States

State or Province: FL

Postal Code: 33647

Organization Name: null

To all that this issue will affect,

I am adamantly opposed to allowing the FCC to take land lines away in favor of having wireless only options. There are two primary reasons that removing land lines would negatively impact society- both very serious issues that are being treated with a complete lack of respect for painfully simple logic.

Number one, removing land lines would leave the citizens of this nation vulnerable to communication outage in any number of circumstances. The department of Homeland security should weigh in on the very real possibilities of communication outage by natural disaster, terrorists or "blackmailers" hacking into a system made vulnerable by access to a "universal grid" created by a completely wireless system, and breach of privacy based on the FACT that a system that is completely dependent on any one form of wireless or electric "grid" is inherently vulnerable to massive shut downs and black outs.

Absolutely no failsafe plan exists to account for the unpredictability of mother nature as has been recently evidenced by the current nuclear crisis in Japan. Furthermore, there is no way to guarantee protection from the endless possibilities associated with any system that can be hacked into, piggybacked upon, etc.

Secondly, to take away choice in a commodity that is as personal and as necessary as communication is a violation of consumer rights. While the topic of the safety of using wireless communication in regards to health consequences continues to evolve, it would be absolutely foolish to impose a technology on the unsuspecting public that years from now will certainly be defined by uncertainty. No one can force me to take a medication, have surgery, or opt for an experimental treatment plan in treating disease- and yet the FCC's proposal to take away land lines from the american public will force people to use a technology that is not known to be safe. Do not take allow the FCC to profit from mandating the use of wireless

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Sandra

Last Name: Chianfoni

Mailing Address: PO Box 755

City: Monterey

Country: United States

State or Province: MA

Postal Code: 01245

Organization Name: null

Land lines continue to be lifelines, despite the federal agency's attempt to do away with them. During emergencies, tiny, fragile cellphones can be easily lost or broken, and they need to be recharged - not possible when the power is out. During natural disasters, when cellphone service may be uneven, land lines can help emergency personnel know your location. Even cellphone companies rely upon landline systems in such times to complete calls, route calls and connect their towers to the national network.

People with disabilities such as EHS are discriminated against by taking away land lines.

The idea of this even being proposed when the jury is still out on proving or disproving the harm non ionizing radiation exposure potentially may have on Americans is a grave disservice and a reckless irresponsible one as well.

This would also force children, especially to depend solely on the cell phone, when it is recommended in some countries warn their citizens against children using cell phones until a certain age. Now that cell phones are more than just a cell phone and have become a computer; people will not use these devices moderately. Parents can not monitor their children 24/7 to ensure moderate use.

This action will add to the continuing stripping of our Human Rights so that Corporate America can profit.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: diane

Last Name: ensign

Mailing Address: 5556 n. maria dr.

City: tucson

Country: United States

State or Province: AZ

Postal Code: 85704

Organization Name: null

It is of utmost importance that our land line telephone service not be replaced by wireless cell phones. I am extremely adversely affected by wireless cell phones with severe head ache & my central nervous system is affected adversely as well. I work with many other people who share these ill affects from cell phone use. We must be allowed our access to our land line phones. The data out there on cell phones is very mixed with the suppliers selling them saying they are safe v/s the many people everywhere saying they are harmful & cause problems such as cancer especially in our children. We don't want to be the guinea pigs of the industry.
sincerely, diane ensign

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: David

Last Name: Owen

Mailing Address: 509 Wanda Ridge

City: Durham

Country: United States

State or Province: NC

Postal Code: 27712

Organization Name: null

I do not want to use cell phones.

the reception is poor and the danger of electromagnetic radiation is obvious.

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: judy

Last Name: copeland

Mailing Address: 5296 addison

City: detroit

Country: United States

State or Province: MI

Postal Code: 48210

Organization Name: null

I will not give out personal information over a cell phone. The cell phone is an unsecure line and, I do not trust saying anything on it. I only do business on a land line; that is why I have both.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Lynn

Last Name: Mittelstadt

Mailing Address: PO Box 245

City: Eskridge

Country: United States

State or Province: KS

Postal Code: 66423

Organization Name: individual American citizen

If this regulation is meant to eliminate land line phone service, I am totally opposed to it for these reasons: I live in tornado alley where electricity goes out often and cell phone towers are blown over by winds. Land lines are the only things that allow us to communicate with emergency services. Also, I have friends who have very bad physical reactions to cell phones (terrible headaches and body pain) and/or simply cannot afford them because every single phone call going out OR coming in (double dipping by the cell phone companies, charging both sender and receiver for the same air time) is a cost (unlike landlines where 800 number and local number calling is free).

This is a public health issue because so many people have bad reactions to the increased electrical fields created by cell phones, microwaves, broadband, etc. and because so many people simply cannot afford these new, UNNECESSARY, CORPORATE MONEY-MAKING schemes.

I thank you in advance for your consideration of these matters and hope that reason and public health issues rule the day in making your decisions. It is the SOUL of America to take care of its citizens and to be aware of health and financial issues -- it is NOT to keep feeding corporate and individual GREED. - Lynn Mittelstadt, Eskridge, KS

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Phyllis

Last Name: Couper

Mailing Address: P. O. Box 1901

City: Pleasanton

Country: United States

State or Province: CA

Postal Code: 94566

Organization Name: null

THIS IS A BAD IDEA BECAUSE AT LEAST 10 MILLION HANDICAPPED AMERICANS RELY ON CURRENT PHONE PROCEDURES, AND MANY OTHER AMERICANS ARE IN AREAS THAT DO NOT HAVE CELL PHONE RECEPTORS. MORE AND MORE RESEARCH IS BEING DONE AND PROVING THAT THE INCREASING NUMBER OF PHONE WAVES FROM CELL PHONES IS CAUSING THE BEE POPULATION TO BECOME DISORIENTED AND DIE OR NEVER FIND THEIR HIVES ONCE LEAVING. WITHOUT POLLINATION, WE HAVE NO FOOD, AND THUS NO LIFE, SO CELL PHONES WILL NOT BE NEEDED.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: MARY RUSSELL

Last Name: ARRINGTON

Mailing Address: 201 W. 9TH NORTH ST.

City: SUMMERVILLE

Country: United States

State or Province: SC

Postal Code: 29483

Organization Name: CITIZEN COMMENT

DEAR FCC,

SOME PEOPLE HAVE HEALTH ISSUES WITH USING
WIRELESS PHONES. PLEASE DO NOT TAKE AWAY OUR
LAND LINES.

I CANNOT AFFORD WIRELESS PHONE SERVICE. THERE
ARE MANY PEOPLE LIKE ME ALSO ON LIMITED BUDGET
THAT FIND LANDLINES MORE AFFORDABLE.

THANK YOU FOR CONSIDERING MY COMMENTS.

PLEASE LEAVE US WITH A CHOICE IN WHAT KIND OF
PHONE WE WILL USE.

SINCERELY,

MARY RUSSELL ARRINGTON

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Carol

Last Name: Bass, PhD

Mailing Address: 5736 Buckhaven Ct

City: Alexandria

Country: United States

State or Province: VA

Postal Code: 22315

Organization Name: Self

It is very important for the FCC not to eliminate some subsidies for ordinary telephone services now or in the future and reallocate Universal Service Fund money to pay for fixed and wireless broadband instead. This is considered to be the first step in eliminating the Universal Service Fund and thus creating a "Connect America Fund," which could only be used to subsidize fixed and wireless broadband.

In addition, the FCC should not reduce the allowable per-minute rate for long distance phone calls, even though it may be less profitable for companies to operate landlines.

It is very important for the FCC understands that the switched telephone network must be maintained. The Architectural and Transportation Barriers Compliance Board ("the Access Board"), is the federal agency that administers the Americans with Disabilities Act. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities (www.access-board.gov/research/ieq/intro.cfm). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

Personally, I cannot use a cellphone because they/it makes my head hurt. A cellphone and similar electrical hand held devices cause my lungs to burn and I have impaired breathing. It appears that both electrical and chemical emissions from these devices are the cause of my physical impacts. Landlines are needed as a continued accommodation to disability. Removing landlines is removing an accommodation/service that electrically sensitive and/or chemically sensitive individuals require. Sincerely, Carol Bass, PhD, (703) 971-2088

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Darryl

Last Name: Templer

Mailing Address: P.O. Box 2911

City: La Jolla

Country: United States

State or Province: CA

Postal Code: 92038

Organization Name: null

Please do not eliminate wired, land-line phones in the U.S. They provide a level of security that cell phones do not for my wife. My sister-in-law, who has environmental illness, cannot tolerate using a cell phone without getting a migraine. She would be cut off because she also cannot use a computer. She would not be able to call for emergency services. She lives in a remote part of Arizona that does not even have cell phone service. There are 10 million Americans that have electromagnetic sensitivities who also would be without this vital link for emergency services. This would be discrimination against Americans with Disabilities. Also, in Europe regulations prevent young children from using cell phones because health risks. Do we want to expose our children to this risk? Please reconsider before destroying a vital communication system that already exists.

Thank you.

Sincerely,

Darryl Templer

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Mary

Last Name: Templer

Mailing Address: P.O. Box 2911

City: La Jolla

Country: United States

State or Province: CA

Postal Code: 92038

Organization Name: null

Please do not eliminate wired, land-line phones in the U.S. They provide a level of security that cell phones do not for me. My sister, who has environmental illness, cannot tolerate using a cell phone without getting a migraine. She would be cut off because she also cannot use a computer. She would not be able to call for emergency services. She lives in a remote part of Arizona that does not even have cell phone service. There are 10 million Americans that have electromagnetic sensitivities who also would be without this vital link for emergency services. This would be discrimination against Americans with Disabilities. Also, in Europe regulations prevent young children from using cell phones because health risks. Do we want to expose our children to this risk? Please reconsider before destroying a vital communication system that already exists.

Thank you.

Sincerely,

Mary Templer

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Janice

Last Name: Schroeder

Mailing Address: 1610 Curtis St.

City: Berkeley

Country: United States

State or Province: CA

Postal Code: 94702

Organization Name: null

I urge you not to begin the process which could result in the abolition of landlines. My family does not have cell phones or cordless phones. We like our old-fashioned landline and want to keep it. We are concerned about possible adverse health effects from wireless and cordless phones, etc.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Joanna

Last Name: Crump

Mailing Address: 2271 S Moeller Cir

City: New Palestine

Country: United States

State or Province: IN

Postal Code: 46163

Organization Name: null

I have electromagnetic frequency sensitivity. I cannot use a cell phone. Please do not get rid of land line phones. Thank you for your consideration.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Aileen

Last Name: Arrington

Mailing Address: PO Box 1621

City: Folly Beach

Country: United States

State or Province: SC

Postal Code: 29439

Organization Name: self

Please allow us to keep our landlines. Many of us have concerns over the health issues involved with having to not use landlines. Also the cost is prohibitive for those of us who are trying to not overspend. Citizens have the right to choose a landline phone. We have the right to opt out of wireless devices. If the FCC's proposal passes, we will be denied the right to choose a landline.

What about people with medical implants and severe headaches from using these wireless phones. And what about people with Radiofrequency Sickness?

I cannot believe you are going to take away our right to help ourselves stay as well as possible.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Nancy Jo

Last Name: Cornett

Mailing Address: P.O. Box 211, 146 Clearview Dr.

City: Hyden

Country: United States

State or Province: KY

Postal Code: 41749

Organization Name: null

Whoa! Wireless communication is a long way from being made either safe or reliable. Or affordable. Yes, it has its uses, but it cannot be considered the solitary source of communication.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Victoria

Last Name: Jewett

Mailing Address: 1405 Seville Rd.

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87505

Organization Name: null

I am completely devastated by wireless technology, especially cordless phones. I can not use a cell phone. If I am within 150 feet of a cordless phone I can feel the radiation, and I cannot live that near to one.

If you do get rid of landlines I will be unable to speak on the telephone. I am not exaggerating! I am a trained librarian.

Victoria Jewett

MLS

Submitter Info

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Stephen

Last Name: Weiss

Mailing Address: 4137 Montgomery Blvd NE

City: Albuquerque

Country: United States

State or Province: NM

Postal Code: 87109

Organization Name: Stephen P. Weiss M.D., P.A.

To Whom It May Concern,

I am a Board Certified Family Physician and I am deeply disturbed that the FCC would like to do away with land-line telephones. I have several patients in my practice who become physically ill when they use cellular phones, due to a hypersensitivity to EMFs (electromagnetic fields), and I myself have a mild version of this. The long-term safety of cellular phones has not been established, and there is much scientific information about the dangers of cellular phones which concerns me. Doing away with land-lines would literally devastate these patients, several of whom are mostly home-bound. I urge you to drop this proposal immediately.

Sincerely Yours,

Stephen P. Weiss M.D.

Clinical Assistant Professor

Dept. of Family & Community Medicine

Univ. of New Mexico School of Medicine

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: William

Last Name: Rea

Mailing Address: 8345 Walnut Hill Lane, Ste. 220

City: Dallas

Country: United States

State or Province: TX

Postal Code: 75231

Organization Name: Environmental Health Center - Dallas

We have a great many patients that cannot tolerate wireless. Please rethink this.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Judy

Last Name: Harding

Mailing Address: 2201 Pine View Circle

City: Sarasota

Country: United States

State or Province: FL

Postal Code: 34231-6929

Organization Name: null

My husband and I are very electrically sensitive. We use land-line phones from our fiberoptic Verizon phone lines. Our cellphone is used only for emergencies.

We have been so grateful to be able to protect ourselves some from the high electric fields of cellphones. Now if you do anyway with land lines, what in the world are we going to do?

Haven't you heard about all the studies showing how damaging the cellphone radiation can be to immune systems, especially for the young and older population?

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Ellen

Last Name: Marks

Mailing Address: 16 Amanda Lane

City: Lafayette

Country: United States

State or Province: CA

Postal Code: 94549

Organization Name: California brain tumor association

Do not give up landlines in the United States. I vehemently oppose this for many reasons. The most critical issue is health issues involving mobile phone use, especially for children.

There is enough conclusive science to be certain that current mobile phones are causing brain tumors and cancers all over the body wherever they are kept while "on".

Landlines are a valuable tool and should not be abandoned.

Thank you!

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: JoAnne

Last Name: Price

Mailing Address: 13111 Frances

City: Stafford

Country: United States

State or Province: TX

Postal Code: 77477

Organization Name: null

Multiple chemical sensitivity(MCS) and electrical hypersensitivity (EHS) are often linked. I have experience the effects of both. An emerging serious problem for people with EHS are wireless devices and their hotspots. Eliminating wired telephones would increase the prevalence of hotspots and the resultant negative health effects.

Electromagnetic radiation (EMR) has been associated with wireless devices. Research has shown some of the EMR biological effects are DNA damage and disruption of DNA repair, suppression of the immune system, disruption to normal functioning of neurological, cardiovascular and endocrine system, and leakage of the blood-brain barrier.

The purpose of this comment is that the FCC may consider that not all portions of our society may be well served by eliminating wired telephone devices.

Submitter Info

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: SUSAN

Last Name: FOSTER

Mailing Address: 15957 AVENIDA CALMA

City: RANCHO SANTA FE

Country: United States

State or Province: CA

Postal Code: 92091

Organization Name: self employed medical writer

I implored the FCC to maintain the switched telephone network for voice communication. I have EHS, Electro Hyper-Sensitivity and cannot use a cellphone or wireless computer. I am also sensitive to cordless phones, and therefore use only a landline phone in my home. I have written extensively about RF radiation which can result in EHS as well as other neurological disorders and immunological disorders, including cancer. THE LESS ONE IS EXPOSED TO WIRELESS MEANS OF COMMUNICATION, THE MORE THEY ARE ABLE TO RECOVER THEIR HEALTH AND REMAIN PRODUCTIVE MEMBERS OF SOCIETY.

Thank you for your most sincere consideration. To disregard 10 million Americans would be to trample on our rights under the ADA. Please keep the switched telephone network for voice communication.

Respectfully Submitted,
Susan Foster, MSW

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Michael

Last Name: Worsham

Mailing Address: 1916 Cosner Road

City: Forest Hill

Country: United States

State or Province: MD

Postal Code: 21050

Organization Name: NA

Re: FCC Notice of Proposed Rule Making (NPRM), Developing an Unified Inter-carrier Compensation - FCC-2011-0078-0001.

I have and use only a land line, and will not use cell phones. The rule making seems to lead towards the end of or greater costs for landlines. That would of course, be insane, for the following non-exhaustive list of reasons.

(1) As a consumer protection lawyer, in the last few weeks I spent days answering and making phone calls to members of a class action settlement that, in an indirect way, involved cell phones. Most of the people calling were calling from cell phones, and the reception was often poor, and at least not as clear as landlines. It was actually quite annoying in a few calls, and I was wishing the people were calling from land lines.

(2) I know of persons, and one person in particular, who are electrically sensitive, and who can not use cell phones.

(3) Increased used of cell phones, beyond their already overuse, will lead to more cell towers marring our landscape and irradiating our planet with unknown but presumably adverse health and environmental consequences. Mobile phones have not been proven safe.

(4) Mergers are resulting in a near monopoly of cell phone companies.

Therefore the FCC should ensure that all citizens be allowed the choice to keep safe, secure, reliable and affordable land line phones.

Thank you. - Michael C. Worsham

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Public Comments on Developing an Unified Intercarrier Compensation: =====

Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

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Organization Name: null

Please do not support a wireless phone system and infrastructure nationwide at the expense of the land line phone system. I, and millions of other people, choose to continue using land line phones which are safer, and more secure, reliable, affordable, and durable. Land lines also offer better communication, use less power and are easier to use.

Many people suffer debilitating health effects from electromagnetic radiation emitted by the cell phone system, referred to as Radiofrequency Sickness, or have medical implants, and others do not want to increase their risk of illness, even cancer, over the long term. Children and pregnant women are especially vulnerable and should not use cell phones or be exposed to wireless devices and their infrastructure. The cell phone system has not been proven safe and the growing body of evidence of health effects revealed in research studies is mostly being ignored. There is no safe exposure standard for continuous, nonionizing electromagnetic radiation from multiple sources on the biology of the general population. The telecom industry is not voluntarily providing a safe system. Their goal is to expand use of cell phones, constantly upgrade the phones to boost sales and increase profits. The new proposal of the FCC fails to address how wireless infrastructure will be monitored and regulated to help prevent disasters like the Malibu fires in California that ABC News confirmed on April 26, 2009 were caused by utility poles overburdened by cellular phone gear. Your duty is to facilitate a safe, secure, reliable, durable and affordable communication system for ALL U.S. citizens and uphold all the laws, including the 14th Amendment of the Constitution, equal protection under the law, and the Americans with Disabilities Act. Please help change the 1996 Telecommunications Act to include environmental and health considerations in the placement of cell towers and antennas. PLEASE MAINTAIN A VIABLE, SAFE LAND LINE PHONE SYSTEM. Thank you.

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Landline service is absolutely essential to many people and must be preserved.

The current cell phone and Wifi technology is not safe. There are a growing number of people, including myself, who are suffering adverse reactions from exposure to wireless technologies. Many people are reporting migraine headaches, heart palpitations, extreme fatigue, insomnia, difficulty concentrating and many more adverse effects from wireless radiation.

This portion of the population cannot use cell phones due to health constraints. They rely exclusively on the landline telephone network for voice communication. Doing away with landlines would necessitate installing a greater number of cell towers in residential neighborhoods, causing further adverse health effects for those who are sensitive to wireless radiation.

VoIP service requires a broadband Internet connection. Many people with electrical sensitivity also react adversely to the EMFs emitted from computers and broadband connections. Eliminating landline service would deny these people access to phone service, a fundamental and essential right and resource. This would also constitute a serious violation of the Americans with Disabilities Act (ADA).

Please also consider these important points

Landlines are not affected by power outages, and are far superior for emergency needs:

Landline phones provide much better service than digital and wireless phones when it comes to power outages, 911 emergency calls, alarm monitoring services and call quality. 911 was built on landline infrastructure, and relies on people calling from landline phones to tell where they are calling from.

Landlines have much better call quality.:

There are no dropped calls, and the voice quality is much clearer and more reliable. Severe weather, building materials and heavy foliage are just a few of the things that can interfere with signal transmission and r

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Last Name: Glendinning

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Country: Bolivia

State or Province: Cochabamba

Postal Code: 00000

Organization Name: null

I am a US citizen, hold a PhD in psychology -- and am electro-sensitive.
I live in Bolivia to escape the heavy contamination of electromagnetic radiation in the US. Each day there is news of yet another method of exposing US citizens to EMR, and this new rule seeking to end landline availability is one of them.
If I were in the US, I would then NOT HAVE A TELEPHONE AT ALL -- a severe irony for a descendant of Alexander Graham Bell.
Please do not allow government and industry to stop landline availability.

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Last Name: Stiver Zinn

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Country: United States

State or Province: NM

Postal Code: 87508

Organization Name: null

I am requesting that our landlines be continued in the United States. I do not believe that cell phones are reliable enough to be without the landline capability. I intentionally maintain a landline in my home and office so that I will not be out of service when cell service is non functional. This happens frequently and I believe it is imperative to maintain the landlines, esp, in case of emergency.

I also am under the understanding that there are as many as 10 million people who cannot use cell phone or broadband because of electromagnetic sensitivities. Therefore, I believe this would be against the ADA mission.

Sincerely, Sherie Stiver Zinn

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Organization Name: null

FCC-2011-0078-0001

I do not want the FCC to help dismantle the land line telephone system in this country for two reasons. 1) Unlike what the cell phone companies claim, they do not cover most of the U.S.. In fact they only cover a fraction of the country with dependable service, resulting in too costly of a phone service, or none at all. 2) When they find out that cell phone use is bad for your health, and they will, people will not be able to go back to the old phone system.

Thank You

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Organization Name: null

PLEASE KEEP PHONES GREEN & WIRED

Citizens must be allowed the choice to keep landline phones. Landlines are safe, secure, reliable and affordable. Mobile phones have not been proven safe. In addition, cellular towers and antennae create a whole other area of research in order to be proven safe. Everyone is in agreement that that no conclusive studies have been done; the field is too new to have accumulated all of the data necessary to prove these antennae safe. There may not be a definitive answer for years! Let's not take an unnecessary risk and protect our children! We don't want cellular radiation to be the next cigarettes or asbestos.

The FCC's duty is to facilitate communications for the whole country. Its new proposal jumps the gun on the undetermined issues of health, safety, privacy, affordability and security.

As the FCC has stated, it does not have the expertise to determine safety standards for exposure to radiofrequency (RF) radiation. The FCC's new proposal also fails to outline how wireless infrastructure will be monitored and regulated.

Landlines are safe. Landlines are reliable. Landlines are affordable. Landlines are easy to use. Landlines are Green.

Even cellphone companies rely upon landline systems during outages to complete calls, route calls and connect their towers to the national network.

While mobile phones may offer convenience, they do not replace the benefits of landline telephones.

Thank you for your consideration.

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State or Province: NY

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Organization Name: Cloutnow.org

I am completely and vehemently opposed to eliminating landlines. Research on the risks to public health from an over-saturation in the environment of low-level continuous EMF radiation is quite compelling. Cell phones and cell antennas are one source of this danger, and the 'Precautionary Principle' recognized by the European Union and the Bioinitiative Report should be heeded in making any decision regarding the possibility of making the public depend entirely on cell phones. Please do not allow this to happen! We do not want to wait for the corpses to roll in to make a decision that enough research exists regarding spikes in cancer rates in communities located near a high density of cell antennas to warrant maintaining landlines as a permanent alternative to cell phones for the general public... See "Full Signal," a documentary made by Talal Jabari, to hear from scientists internationally on these dangers.

Press Release

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Risks of Brain Tumors Among Cell Phone Users Underestimated in Interphone Study, Says International EMF Collaborative

***Data for Acoustic Neuromas and Salivary Gland Tumors,
Located Closest to the Ear, Were Not Published—Group Asks for Full
Disclosure and Urgent Research on Cell Phone Risks for Children***

Berkeley, CA and Sutton Coldfield, England, May 17, 2010. Authors of the report, “Cellphones and Brain Tumors: 15 Reasons for Concern, *Science, Spin and the Truth Behind Interphone*” have released a technical analysis of the long-awaited Interphone Study published today in the *International Journal of Epidemiology*. **Download Report:** HYPERLINK "http://www.radiationresearch.org" www.radiationresearch.org.

Despite the Interphone Study Group’s long-awaited acknowledgment of increased risk of brain cancer among long-term, heavy users of cell phones, the International EMF Collaborative says the study’s design results in serious underestimation of risk of brain cancer.

The 11 key design flaws were fully detailed in the group’s landmark report last August (HYPERLINK "http://snurl.com/wdgbd" <http://snurl.com/wdgbd>). One example was that individuals using cordless phones but not cellphones were considered ‘unexposed’ for purposes of the Interphone analysis, though exposed to the same radiation as cell phones.

The results published today appear to show that in many cases use of a cellphone *protects* users from brain tumors, but this is a reflection of the design flaws, according to Lloyd Morgan, B.Sc., lead author of “*Cellphones and Brain Tumors: 15 Reasons for Concern*”. Other issues with the Interphone study, he says, include:

Results were only provided for brain cancers (gliomas) and meningiomas, but not tumors within the 20% of the brain's volume irradiated by cell phones.

Risk was not broken down by gender, which may have obfuscated even higher risk of meningiomas in women.

The 5-year old results are woefully inadequate as a gauge of risk today, as adults and children now speak on cell phones many hours a day compared to only 2- 2 ½ hours a month at that time.

Eileen O'Connor, Director of the Radiation Research Trust and member of the International EMF Collaborative, says "Four billion people own mobile phones worldwide, many of those users are children. Responsible governments must advocate for public transparency of risks so that an informed public may have more options to exercise precaution".

**VIDEO - INTERPHONE DESIGN FLAWS WITH L. LLOYD MORGAN, B.Sc. –
COMING SOON - HYPERLINK "<http://vimeo.com/8109152>"
<http://vimeo.com/8109152>**

XXX

Cell Phone Radiation Science Review on Cancer Risks and Children's Health



Cell Phone Radiation

Science Review on Cancer Risks and Children's Health

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ewg.org/cellphoneradiation/fullreport

Cell Phone Radiation Science Review

Executive Summary

More than 4 billion people around the world use cell phones (ITU 2009). Because cell phone technology has been around for just two decades, scientists do not yet fully understand long-term health risks from cell phone radiation. But recent research has prompted serious concerns about exposure to wireless emissions.

Prior to 2003, studies of cancer risk and cell phone use produced conflicting results. FDA told consumers that scientists had found no harmful health effects from exposure to cell phone emissions. (FDA 2003).

But FDA's assurances were based on studies of people who had used cell phones for just 3 years, on an average (FDA 2003), not long enough to develop cancer. At that time, studies had not addressed the risks of longer-term exposures.

The research gap is closing. Scientists around the world have recently associated serious health problems with using cell phones for 10 years or longer:

- A joint study by researchers in Denmark, Finland, Norway, Sweden and the United Kingdom found that people who had used cell phones for more than 10 years had a significantly increased risk of developing glioma, a usually malignant brain tumor, on the side of the head they had favored for cell phone conversations (International Agency for Research on Cancer (IARC) 2008; Lahkola 2007).
- French and German scientists reported an increased risk of glioma for long-term cell phone users (Hours 2007; Schuz, Bohler, Berg 2006). Analysis of all published cell phone-brain tumor studies found that people who had used a cell phone for 10 or more years, the overall risk for developing a glioma on the cell phone side of the head increased by 90 percent (Hardell 2009; Kundi 2009).
- Cell phone use for 10 years and longer has been also associated with significantly increased risk of acoustic neuroma, a type of benign brain tumor, on the primary side of cell phone use (IARC 2008; Schoemaker 2005). An extensive review of published studies of acoustic neuroma found that long-term cell phone users had a 60 percent greater risk of being diagnosed with the disease (Hardell 2009; Kundi 2009).
- A study from Israel reported an association between frequent and prolonged mobile phone use and parotid (salivary) gland tumors (Sadetzki 2008). Scientists analyzing data from Sweden and Denmark combined found that people who had used cell phones for at least 10 years ran an increased risk of benign parotid gland tumors (IARC 2008; Lonn 2006).
- Multiple studies reported that the brains of young children absorb more radiation than those of adults (de Salles 2006; Gandhi 1996; Kang 2002; Martinez-Burdalo 2004; Wang 2003; Wiart 2008), potentially rendering them more vulnerable to brain tumors (NRC 2008b). Researchers in Sweden found the highest risk of brain tumors among people who started using cell phones during adolescence (Hardell 2009).

Recent studies link cell phone radiation to:

Brain cancer: Two analyses of 25 original publications identified a 50 to 90 percent increase in risk for two types of brain tumors: glioma and acoustic neuroma (Hardell 2009, Kundi 2009).

Salivary gland tumors: An Israeli study found an increased risk of 50 to 60 percent for salivary gland tumors among people with highest cell phone use (Sadetzki 2008).

Behavioral problems: A study of 13,159 Danish children showed 80 percent elevated risk for emotional and hyperactivity problems among young children who use cell phones and whose mothers also used cell phones during pregnancy (Divan 2008).

Migraines and vertigo: A study of 420,095 Danish adults showed that long-term cell phone users were 10 to 20 percent more likely to be hospitalized for migraines and vertigo than people who took up cell phones more recently. (Schuz 2009).

Scientists have known for decades that high doses of the radiofrequency radiation emitted by cell phones can penetrate the body, heat tissues, trigger behavioral problems and damage sensitive tissues like the eyeball and testicle (Heynick 2003; IEEE 2006).

Yet when cell phones went on the market in the 1980s, federal regulators did not require manufacturers to prove they were safe (GAO 1994).

Recent studies raise particular concerns about the impact of cell phone emissions on children. The National Research Council (NRC) has observed that "with the rapid advances in technologies and communications utilizing [radiation in the range of cell phone frequencies], children are increasingly exposed... at earlier ages (starting at age 6 or before)" (NRC 2008b). The NRC called for "investigation of the potential effects of RF fields in the development of childhood brain tumor" (NRC 2008b).

- Research by France Telecom scientists showed that under standard conditions of use, twice as much cell phone radiation would penetrate a child's thinner, softer skull than an adult's (Wiat 2008). These results confirm earlier findings that children's heads absorb more radiofrequency radiation than adults (Gandhi 1996; Kang 2002; Wang 2003).
- Children will be exposed to cell phone radiation for more years and therefore in greater total amounts than the current generation of adults (NRC 2008b).

Few research studies have focused on the health hazards of children's cell phone use, even though the youth market is growing. But one recent study of 13,159 Danish children showed that young children who use cell phones and whose mothers also used cell phones during pregnancy are 80 percent more likely to suffer emotional and hyperactivity problems (Divan 2008).

In response to the growing debate over the safety of cell phone emissions, government agencies in Germany, Switzerland, Israel, United Kingdom, France, and Finland and the European Parliament have recommended actions to help consumers reduce exposures to cell phone radiation, especially for young children.

In contrast, the two U.S. federal agencies that regulate cell phones, the Food and Drug Administration (FDA) and the Federal Communication Commission (FCC), have all but ignored evidence that long term cell phone use may be risky.

Government actions: radiation standards and public education

Health agencies in six nations — Switzerland, Germany, Israel, France, United Kingdom, and Finland — have recommended reducing children's exposures to cell phone radiation.

In 2008, the European Parliament passed a resolution urging member countries to develop lower radiation emission limits for cell phones. Legislation introduced in the French Senate would ban marketing and sales of phones for children under age 6.

Brussels, Belgium; Salzburg, Austria; and Christchurch, New Zealand have proposed strict local cell phone radiation standards. Toronto has issued guidance to parents on reducing children's cell phone use.

The FCC adopted radiation standards developed by the cell phone industry 17 years ago. These standards, still in use, allow 20 times more radiation to reach the head than the rest of the body. They do not account for risks to children.

While compiling a database of radiation emitted by more than 1,000 cell phones sold in the U.S., the Environmental Working Group has found that emissions can vary by a factor of up to 8 from one phone to another.

The cell phone industry has reported 270 million wireless subscriptions by the end of 2008, equivalent to 87 percent of the U.S. population (CTIA 2009, ITU 2009). This number is only expected to grow. Consumers need — at a minimum — easy access to cell phone radiation information so that they can make informed purchasing decisions and protect themselves and their families from potential health concerns.

Studies: Cell phone radiation may cause tissue damage

Cell phones communicate via electromagnetic waves. During signal transmission, a comparable amount of radiation travels outward, towards the base station, and inward, towards the ear or head of the cell phone user. (IEGMP 2000).

Cell phone waves are in the “radiofrequency” range. They lack the penetrating energy of X-rays and radioactivity. Scientists are still exploring how cell phone radiation may cause the harmful effects that some studies have described.

Scientific research conducted over the past decade has associated cell phone radiation with increased risk of developing brain and salivary gland tumors, neurological symptoms such as migraine and vertigo, and neurodevelopmental effects observed as behavioral problems in young children (BioInitiative 2007; Divan 2008; Kundi 2009; Sadetzki 2008; Schuz 2009).

Cell phones, radios and TV transmissions emit non-ionizing radiation that has a longer wavelength, lower frequency and lower overall energy per photon than UV light, X-rays and gamma rays (a form of radioactivity), which are known as ionizing radiation because they have enough power to eject an electron from its orbit and leave behind a charged ion that can damage cells and tissues.

The National Research Council has reported that exposure to cell phone radiation may affect the immune, endocrine and nervous systems, fetal development and overall metabolism (NRC 2008b). Children are likely to be more susceptible than adults to effects from cell phone radiation, since the brain of a child is still developing and its nervous tissues absorb a greater portion of incoming radiation compared to that of an adult (Gandhi 1996; Kang 2002; Kheifets 2005; Schuz 2005; Wang 2003; Wiart 2008).

FCC industry radiation standards have little margin of safety

The FCC’s cell phone radiation standards closely follow the recommendations of the Institute of Electrical and Electronics Engineers (IEEE) (FCC 1997). These standards allow 20 times more radiation to penetrate the head than the rest of the body and do not account for risks to children.

FCC standards limit the radiation absorbed by a cell phone user’s brain and body to a specific absorption rate, or SAR, measured by the amount of the phone’s radiation energy (in watts, W) absorbed per kilogram of tissue (W/kg).

Current FCC regulations permit SAR levels of up to 1.6 W/kg for partial body (head) exposure, 0.08 W/kg for whole-body exposure, and 4 W/kg for exposure to the hands, wrists, feet and ankles (FCC 1997, 1999).

The FCC standards are based on animal studies conducted in late 1970s and early 1980s (Osepchuk 2003). FCC, on the recommendation of the IEEE, adopted SAR level of 4 W/kg as the point of departure for determining legal SAR limits for cell phones. In contrast to the FCC decision, an independent analysis by the EPA scientists concluded, on the basis of the same body of data, that biological effects occur at SAR levels of 1 W/kg, 4 times lower than the SAR level chosen by IEEE (U.S. EPA 1984). Exposure to radiofrequency radiation at these SAR levels induces tissue heating that leads to behavioral alterations in mice, rats, and monkeys, that may be a “potentially adverse effect in human beings” (IEEE 2006).

Current FCC standards fail to provide an adequate margin of safety for cell phone radiation exposure and lack a meaningful biological basis.

For example, the FCC standard for the head is just 2.5 times lower than the level that caused behavioral changes in animals. The standard that applies to hands, wrists, feet, and ankles has no safety margin whatsoever.

The FCC adopted IEEE’s proposal to allow 20 times more radiation to the head than the average amount allowed for the whole body, even though the brain may well be one of the most sensitive parts of human body with respect to radiofrequency radiation and should have more protection.

To receive the FCC approval for selling a cell phone in the U.S. market, manufacturers typically conduct the phone’s SAR tests themselves or contract with the private industry. Private industry organizations (Telecommunication Certification Bodies) are also actively involved in all steps of determining the compliance of cell phones and other wireless devices with the FCC rules (FCC OET 2008f).

SAR testing of cell phones is carried out on a mold in the shape of an adult torso or head which is filled with a viscous fluid mixture selected to simulate the electrical properties of human tissue (GAO 2001). To determine SAR, a cell phone is placed next to the outer surface of the mold and turned on to transmit at the maximum power while a probe is inserted into the viscous inner mixture at various locations, measuring the radiofrequency energy that is being absorbed (GAO 2001).

FCC, the cell phone industry, and the academic community all acknowledge that SAR measurements have significant precision problems (Cardis 2008; FCC OET 2008e; GAO 2001; Wiart 2008). Studies by scientists in academia and the cell phone industry demonstrate that SAR is significantly influenced by the age, shape of the head, and tissue composition (Conil 2008; Wang 2003; Wiart 2008).

The greatest debate is whether the current methods for SAR measurement is adequate for assessing radiation absorption in children's brains (Gandhi 1996; Wang 2003). Recent research on SAR in test models for children's brains and bodies indicates that SAR levels in children would be much higher than in adults (Conil 2008; de Salles 2006; Gandhi 1996; Martinez-Burdalo 2004; Wang 2003; Wiart 2008).

Cell phone standards ignore children

Scientists in a number of countries agree that the head and brain of a child absorb significantly more radiation than those of an adult (de Salles 2006; Gandhi 1996; Kang 2002; Wang 2003; Wiart 2008). Yet U.S. cell phone emission levels and federal standards are based on radiation absorbed by adults and fail to account for children's higher exposures and greater health risks.

In general, as head size decreases, the percentage of energy absorbed by the brain increases, (Martinez-Burdalo 2004). Moreover, children's tissues have higher water and ion content compared to adult tissues (Peyman 2009). Both factors increase radiation absorption, according to researchers from the U.S., the Finnish cell phone company Nokia, Institute of Applied Physics in Spain and the U.K. Health Protection Agency (Gandhi 2002; Keshvari 2006; Martinez-Burdalo 2004; Peyman 2009).

All these data, taken together, suggest that when a child uses a cell phone that complies with the FCC standards, he or she could easily absorb an amount of radiation over the maximum allowed radiation limits defined by the federal guidelines. FCC standards give adults only a slim margin of safety over emission levels that harm animals. For children, the margin is much slimmer – if one exists at all.

Consumers have a right to full information on cell phone radiation levels

Cell phone manufacturers opposed SAR disclosure (Lin 2000) until 2000, when the FCC began posting cell phone SAR values on its web site. After the FCC decision, the Cellular Telecommunications Industry Association (CTIA) began requiring manufacturers to disclose cell phone SARs.

According to CTIA guidelines, a mobile phone SAR value must be listed in the user manual or on a separate sheet. The trade association does not require listing the SAR value on the box or the phone itself (Microwave News 2000).

Cell phone radiation levels are rarely available at retail locations. Consequently, consumers cannot easily identify low-radiation phones.

FCC maintains a database of mobile phone SAR values for devices currently on the market, but it is difficult to use. With significant effort, a consumer can navigate the FCC website to find the SAR value for a specific phone.

To search the FCC database, the consumer needs the mobile phone's FCC ID number, located on a sticker underneath the phone's battery. The first three characters of the FCC ID is the Grantee Code; the remaining numbers and letters of the ID are a product code that can be entered into the online FCC ID Search Form (<http://www.fcc.gov/oet/ea/fccid>), to pull up five to seven data entries. Consumers must scroll manually through each of the data entries to locate the document that lists the SAR value for the specific mobile phone.

In contrast to this cumbersome process, the German Federal Office for Radiation Protection (BfS) maintains a detailed, open directory of information on mobile phones available in the German market (BfS 2008b). Such a publicly available database greatly facilitates consumers' access to SAR data, enables informed purchasing decisions and encourages phone manufacturers to offer lower-SAR phones.

Recommendations

The U.S. government should require phones to be labeled with their radiation emissions at the point of sale, so consumers can make informed decisions about the phones they buy.

The cell phone industry should offer consumers phones that operate with the least possible radiation, and should make each phone's radiation emissions available at the point of sale.

Cell phone users can protect themselves and their families by buying low-radiation phones. Look for currently available low-radiation options in the EWG's cell phone radiation buyer's search tool that lists radiation output of more than 1,000 cell phones.

Cell phone users can also reduce exposures by using their phone in speaker mode or with a headset.

And please help us tell the government to update its cell phone standards.

Cell Phone Radiation Science Review

Section 1: Do cell phones cause cancer or other illnesses?

Research on cancer risk in cell phone users

Researchers and public health experts worldwide actively debate if cell phone radiation can lead to brain cancer (American Cancer Society 2008; FDA 2003; Hardell 2009; IARC 2008, 2009b; Kundi 2009). While earlier, short-term studies did not find an increased risk of brain cancer (Ahlbom 2009; Croft 2008; FDA 2003), long-term data published over the last four years found an increased risk of developing two types of brain tumors on the ipsilateral side (the side of the brain on which the cell phone is primarily held) among people who used a cell phone for longer than 10 years (Hardell, Carlberg 2006b; Hours 2007; Lahkola 2007; Lonn 2005; Schoemaker 2005; Schuz, Bohler, Berg 2006; Takebayashi 2008):

- Glioma – a typically malignant tumor of the brain that arises from glial cells that provide physical support for the central nervous system;
- Acoustic neuroma – a benign tumor of the vestibulocochlear nerve that innervates the ear.

Two recent studies also reported increased risk of salivary gland (parotid gland) tumors among cell phone users (Lonn 2006; Sadetzki 2008).

In the late 1990s, the International Agency for Research on Cancer (IARC) developed a multinational case-control study, INTERPHONE, to address strong public concerns about cell phone safety (Cardis 1999). The goal of the INTERPHONE study was to investigate whether the radiofrequency radiation emitted by cell phones is carcinogenic (IARC 2009b). Thirteen countries participated in the project (Australia, Canada, Denmark, Finland, France, Germany, Israel, Italy, Japan, New Zealand, Norway, Sweden and the UK). The study ran from 2000 to 2006, cost 30 million U.S. dollars (Economist 2008) and involved 14,078 study participants, among them 2,765 glioma, 2,425 meningioma, 1,121 acoustic neurinoma, 109 malignant parotid gland tumour cases and 7,658 controls (Cardis 2007).

The publication of final results and conclusions of the entire INTERPHONE study has been delayed for three years since the conclusion of the study (IARC 2009a; Microwave News 2009). Scientists have questioned whether the study design methods were adequate for detecting increased cancer risk, and whether recall biases might have impacted the quality of the data and resultant conclusions (Cardis 2007; Kundi 2009; Vrijheid, Armstrong 2009; Vrijheid, Cardis 2006; Vrijheid, Deltour 2006; Vrijheid, Richardson 2009). Meanwhile, scientists from different international centers have begun to publish their findings independently (Cardis 2007; Lonn 2005; Schlehofer 2007; Schoemaker 2005; Schuz, Bohler, Schlehofer 2006; Takebayashi 2006).

As described in the article published by the Economist in September 2008:

“Delays in releasing the report have been due to “the difficulty of interpreting the findings due to potential biases” and to the “conducting of additional analyses to try and disentangle the potential impacts of selection and recall errors on the risk estimates”. The Interphone researchers are split into three camps. One believes any increased incidence of tumours shown in the study is purely the result of the biases. Another thinks it really has found increased risks of certain tumours and wants to call for precautionary measures. A third group is just keeping quiet. One person who knows many of the scientists, but prefers not to be named, describes the relations between members of the three groups as “strained”—harsh language in the world of scientific research.” (Economist 2008)

The latest update of the INTERPHONE study results, published on October 8, 2008 (IARC 2008), included 6 publications that found some increase in the risk of glioma for long-term cell phone users, especially on the ipsilateral side (Christensen 2005; Hours 2007; Lahkola 2007; Lonn 2005; Schuz, Bohler, Berg 2006). This side of the head absorbs 97-99% of the total electromagnetic energy deposited in the brain during calls (Cardis 2008), which supports the link between cell phone use and ipsilateral brain tumor development. Only two of the INTERPHONE studies did not find an increased glioma risk (Hepworth 2006; Takebayashi 2008). Increased risk

of glioma associated with long-term cell phone use has been also reported by the Hardell group in Sweden (Hardell, Carlberg 2006b; Hardell 2009).

INTERPHONE results for acoustic neuroma are more varied. Of the 7 INTERPHONE reports on acoustic neuroma, 5 publications based on less than 10 years exposure did not detect an increased risk (Christensen 2004; Hours 2007; Klaeboe 2007; Schlehofer 2007; Takebayashi 2006). In contrast, two publications that were based on longer than 10-year exposure reported an increased risk of acoustic neuroma (Lonn, Ahlbom 2004; Schoemaker 2005). Similar to glioma, the risk for developing acoustic neuroma appears to be strongest for tumors on the ipsilateral side and long-term exposures (Hardell, Carlberg 2006a; IARC 2008).

A meta-analysis that combined results from all brain tumor studies published to date reported that among people who had used cell phones for more than 10 years, the risk of ipsilateral brain tumor increased by 90% for glioma and 60% for acoustic neuroma (Hardell 2009; Kundi 2009). Some studies have also reported an increased risk of the benign brain tumor meningioma, although the risk appears to be smaller and thus much harder to detect (Hardell 2009; Kundi 2009; Takebayashi 2008). Authors of the study noted that the risk appears to be higher in rural areas where phones typically radiate at higher intensities to allow signals to reach distant transmission towers (Hillert 2006).

While the publication of the final INTERPHONE summary is pending (IARC 2009a), detailed post-study analysis suggested that some of the negative findings may have been related to the study design and methods for determining past personal patterns of cell phone use (Hardell and Hansson Mild 2006; IARC 2008; Vrijheid, Cardis 2006; Vrijheid, Deltour 2006; Vrijheid, Mann 2009; Vrijheid, Richardson 2009). For example, among studies where the observed effects were weak, an increased risk of brain tumor was nevertheless reported for long-term users, users with the largest number of calls, and users with the largest numbers of telephones (Hours 2007; Schoemaker 2009).

Recently, a large-scale, multi-center study in Israel also found an association between salivary (parotid) gland cancer and heavy use of cell phones, especially for rural areas where cell phones typically transmit at higher power (Sadetzki 2008). As reported by the team of Israeli scientists, the anatomic location of the parotid gland just below the ear would make it vulnerable to cell phone radiation exposure. Parotid tumor occurs at a relatively young age (43-55 years of age), so that many current cell phone users may already be at risk for these tumors (Sadetzki 2008).

Researchers found a 48-58% increased risk of salivary gland tumors among people who make the greatest total number of calls or who log the most time on the phone without a hands-free device compared to others in the study group, on the side of the brain on which the cell phone was held (ipsilateral). No increased risk was seen for tumors on the other side of the head (Sadetzki 2008). The Israeli findings are in close agreement with an earlier study conducted in Sweden and Denmark; this study, based on a cohort about 1/3rd the size of the Israeli cohort, observed a 40% increased risk of ipsilateral benign tumors (Lonn 2006).

The fact that scientists have measured increased tumor risk in so many studies of cell phone users is even more powerful given that people have used cell phones widely for only about a decade, while cancer typically requires 15-20 years to develop. It seems likely that studies conducted in future years may find more consistent and higher cancer risks (Ahlbom 2004; Ahlbom 2009; Krewski 2001; Krewski 2007; Kundi 2009; Kundi 2004).

Strikingly, the field of research on the health effects of cell phone use has exhibited the signature pattern of a so-called "funding effect," a biased outcome due to source of funding, observed in studies funded by tobacco companies or the manufacturers of industrial chemicals such as the endocrine disrupting plasticizer BPA (vom Saal 2005). In 2001, the U.S. Government Accountability Office voiced a strong concern about the reliability of results from industry-funded studies conducted without government oversight (GAO 2001). A recent systematic review of the source of funding and results of studies of health effects of cell phone use indicated that studies funded by the cell phone industry were ten times more likely to report no adverse effects compared to studies funded by public agencies or charities (Huss 2007; Huss 2008). Thus, some of the heterogeneity in the earlier literature could be related to the source of funding, whereby research sponsors could influence the design of the study, the nature of the exposure, and the type of outcome assessed.

Cell phones and health effects other than cancer

New lines of research are examining central nervous system diseases other than brain tumors in relation to cell phone use:

- A recent Danish study noted an increased risk for neurological symptoms such as migraine and vertigo for cell phone users (Schuz 2009);
- Scientists have found an increased risk for Alzheimer disease associated with electromagnetic radiation (Huss 2009);
- A study from the University of California, Los Angeles found a correlation between prenatal exposure to cell phone radiation and behavioral problems in children (Divan 2008).
- Six studies from the U.S., Australia, Japan and Europe reported that exposure to cell phone radiation has an adverse effect on sperm counts, motility and vitality (Agarwal 2009; De Iuliis 2009; Eroglu 2006; Fejes 2005; Salama 2009; Yan 2007).

In animal studies, scientists have found that exposure during gestation to radiofrequency radiation like that emitted by cell phones is associated with decreased fetal growth, developmental abnormalities, and death of offspring (BioInitiative 2007; Heynick 2003). In occupational health studies for female physiotherapists, conducted in Sweden, Israel, and Finland, scientists found that workplace exposure to radiofrequency radiation during pregnancy is associated with low birth weight, congenital malformations, fetal death, and spontaneous abortions (Kallen 1982; Lerman 2001; Taskinen 1990).

The key question in the cell phone research field is how radiofrequency radiation like that from cell phones affects biological tissues and cells. Scientists have proposed and explored a number of possible mechanisms:

- A number of studies examined the potential for genotoxicity of electromagnetic fields (harm to genetic material in body cells that can lead to mutations and cancer) (BioInitiative 2007; Phillips 2009). While the evidence is not yet conclusive, one quarter of studies published on this issue found a genotoxic effect from low-level exposures (Vijayalaxmi 2008).
- Scientists have reported that cell phone radiation affects levels of reactive oxygen species (ROS) inside the cell (Irmak 2002; Zmyslony 2004). In turn, higher ROS levels trigger intracellular signaling cascades that interrupt the smooth functioning of the cell. Changes in the activation status of molecules within these signaling cascades can lead to inflammation, heart disease, cancer and other chronic health conditions (Boutros 2008; Muslin 2008; Skaper 2007).
- Cell phone radiation-induced reactive oxygen species may well be the causative agent that induces DNA damage, which is a precursor to cancer (Phillips 2009) and a potential mechanism of toxicity to sperm cells (De Iuliis 2009).
- Radiofrequency radiation has been associated with a change in the activity of white blood cells (Aly 2008).
- Exposure to cell phone radiation has been associated with cell death and activation of intracellular signaling molecules (Lee 2008). There is a vigorous debate in the literature regarding the types of conditions under which radiofrequency radiation would cause cell death (Guney 2007; Nikolova 2005; Palumbo 2008; Zhao 2007).

As described in a recent expert review, "In a living cell, many important processes occur by electron transfer across membrane structures in a well-organized manner, ions cross selective channels, proteins get activated and deactivated by cascades of precisely regulated enzymes" (Kundi 2009). These electronic processes would likely be affected by the electromagnetic fields, leading to altered cellular function, growth, and differentiation (Karinen 2008; Moisesescu 2008; Zareen 2009). While none of these processes individually can be considered equivalent to the development of disease, all of them are associated with chronic adverse health effects and need to be considered in the assessment of radiofrequency radiation impact on biological organisms.

Cell Phone Radiation Science Review

Section 2: Cell Phone Safety Standards

Radiofrequency radiation associated with cell phones

FCC established the first radiation standards for cell phones in 1996, 13 years after cell phones were first marketed in the U.S. The agency adopted limits recommended by industry (IEEE C95.1-1991) that were established to protect against high-dose thermal effects, that allow a 20-fold higher exposure to the head (1.6 W/kg) compared to the rest of the body (0.08 W/kg), and that do not account for a child's higher exposure and greater vulnerability to cell phone radiation.

In the U.S., cell phones operate at electromagnetic wave frequency of either 800-900 megahertz (MHz) or 1800-1900 MHz. This frequency range is called radiofrequency (RF), since radios and TVs operate in the same portion of electromagnetic spectrum. The power density or intensity of transmitted electromagnetic field (EMF) is measured in watts (W) per m² or, more commonly, milliwatts per cm² (mW/cm²).

Cell phone radiation is transmitted by the antenna and the circuit elements inside the handset. The antenna and the circuit elements send out the electromagnetic wave (RF radiation) to transmit the signal. The inner antenna is usually a metal helix or a metal rod a few centimeters long that is able to transmit RF radiation of sufficient power so as to deliver the signal from the handset to the base station. The antenna is typically located on the back of a cell phone or a wireless device. The power at which a cell phone must transmit to reach a base terrestrial station is affected by many factors, such as frequency (900 or 1800 MHz), the phone distance from the base station, and physical obstacles between the phone and the base station. To overcome obstacles and interference, a cell phone transmits at greater power. This power is controlled from the base station.

In a rural area with sparse locations of cell phone towers, cell phones need to transmit signal at a greater power (Hillert 2006). A study in Sweden demonstrated that in the rural area, the highest power level was used about 50% of the time, while the lowest power was used only 3% of the time. The corresponding numbers for the city area were approximately 25% and 22% (Lonn, Forssen 2004). In agreement with these data, rural users of cell phones appear to be at a higher tumor risk compared to urban users, likely due to higher power radiation emitted by a phone when located further away from a base station (Hardell 2005; Sadetzki 2008).

EMF radiation emitted by a cell phone antenna is not very directional – similar amounts of radiation are transmitted outward, towards the base station, and inward, towards the ear/head of a cell phone user where they readily penetrate into the body and are absorbed into the inner tissues (Independent Expert Group on Mobile Phones (IEGMP) 2000). Of note, it is possible to design directional antennas so as to decrease radiation exposure to the cell phone user (Wireless Galaxy 2009). Multiple factors influence how much radiation goes into the head, including: the type of digital signal coding in the network, such as GSM (Global System for Mobile Communication), CDMA (Code division multiple access) or UMTS (Universal Mobile Telecommunication System); the antenna design; location of the antenna relative to the head; and the position of the hand or use of an earpiece (Swiss Federal Office of Public Health 2009c).

Of the total radiation emitted towards the head, most (97–99%, depending on frequency and cell phone network) is absorbed in the brain hemisphere on the side where the phone is used (Cardis 2008). The temporal lobe, an area of the brain involved in auditory processing, formation of long-term memory, as well as some aspects of speech and vision, receives the highest radiation exposure (Cardis 2008). Additionally, when a phone is worn near the waist during its use (as may occur when a corded or a cordless headset is used), much of the outgoing radiation is absorbed by adjacent soft tissues, which may pose health risks (Agarwal 2009; Swiss Federal Office of Public Health 2009c; Whittow 2008).

Absorption of radiofrequency energy involves interaction with polar molecules or ions inside the cells and in extracellular fluids such as cerebrospinal fluid, leading to readily detectable temperature elevation in organs and tissues (ICNIRP 1998; IEEE 2006). The heat generated in tissues absorbing RF energy can cause thermal effects that range from behavioral problems to damage to sensitive tissues like the eyeball or testicle. Researchers have

also suggested non-thermal mechanisms of action for some of the effects seen in studies, including effects on ion channels within a cell, effects on membrane enzymes, creation of membrane pores, and free radical formation; scientists worldwide are actively investigating these possible effects of cell phone radiation (NRC 2008b; Weaver 2006).

Specific absorption rate (SAR) for the cell phone radiation

Biological effects caused by radiofrequency radiation depend on the rate at which the energy is absorbed by a particular mass of tissue, calculated as specific absorption rate, or SAR, and measured in watts per kilogram (W/kg). Since brain structures on the side where a cell phone is used (the ipsilateral side) receive significantly higher dose of radiation, and since radiation is unevenly absorbed into different types of tissues (bone, cartilage, nervous tissue, or distinct anatomical structures within the brain), international experts agree that more precise SAR measurements can be obtained when averaging over a smaller volume of tissue (Cardis 2008).

In general, energy absorption rate increases with greater conductivity of tissue and decreases with greater tissue density. Absorption rate is also directly proportional to the intensity of the electromagnetic field (its power density). To carry out an SAR test, a mold in the shape of human torso or head is filled with a fluid designed to simulate the electrical properties of human tissue. Typically, a head model is filled with a thick, viscous mixture that is meant to simulate the conductivity of head tissues; the mixture includes water, salt, sugar, and a chemical viscosity additive. During testing the phone is placed next to the outer surface of the mold and made to transmit a signal at full power while an inner probe is moved through the fluid mixture, measuring the radiofrequency energy that is being absorbed at various locations (IEC 2005). The certified SAR level of a given phone is supposed to be the highest SAR value measured during those tests.

FCC, the industry, and the academic community all acknowledge that SAR measurements have significant precision problems (Cardis 2008; Conil 2008; FCC OET 2008e; GAO 2001; Wiart 2008). Studies by scientists in academia and the cell phone industry, demonstrated that it is difficult to generalize between the SAR induced in two given heads, for people of different ages or body types (Wiart 2008). Although significant methodological improvements occurred over the last decade, in 2008 FCC reported persisting “issues and concerns in applying these [SAR] procedures correctly” (FCC OET 2008b). Additionally, two modeling studies carried out in Japan demonstrated that the whole body SAR can be substantially higher than the current standard when short subjects are exposed to high-power cell phone radiation (Hirata 2007; Wang 2006).

The current SAR standard may pose especial risk to the health of children (Martinez-Burdalo 2004). Children’s tissues have higher numbers of ions compared to adults, resulting in greater conductivity and increased capacity to absorb radiation (Gabriel 2005; Peyman 2009). Children’s heads also have smaller thicknesses of the pinna, skin and skull, reducing the distance from the handset to the peripheral brain tissues (Conil 2008; Wiart 2008). These factors result in higher SAR exposure for young children. According to a recent study with SAR testing models designed to correspond to the 5-8 year old child, a child’s head would absorb twice the radiation of an adults’ (Wiart 2008). Similar results have been reported by the University of Utah researchers in 1996 (Gandhi 1996) and by the researchers from the Nagoya Institute of Technology (Japan) in 2003 (Wang 2003). Due to higher absorption of radiation, when a child uses a high-emitting cell phone, he or she could easily get an exposure over the current FCC limit (Conil 2008).

U.S. SAR standards for cell phones

The FCC limits for cell phone radiation exposure (47CFR 2.1093(d)), based on IEEE recommendations, permit the following SAR levels for whole-body exposure and for partial-body or localized exposure (FCC 1997, 1999):

- Partial-body exposure (head): up to 1.6 W/kg, averaged over 1 g of tissue;
- Whole-body exposure: up to 0.08 W/kg, averaged over 1 g of tissue;
- Hands, wrists, feet, and ankles: up to 4 W/kg, averaged over 10 grams of tissue.

The current SAR standards for radiofrequency radiation were based on animal studies conducted in the late 1970s and early 1980s. These studies demonstrated behavioral alterations, such as disruption of food-motivated

learned behavior, in several animal species, including non-human primates (squirrel monkeys) at an SAR above 4 W/kg (IEEE 2006; Osepchuk 2003). According to the Institute of Electrical and Electronics Engineers (IEEE) International Committee on Electromagnetic Safety, these behavioral changes “may be a potentially adverse effect in human beings” (IEEE 2006).

FCC, on the recommendation of the IEEE, adopted an SAR level of 4 W/kg as the point of departure for determining legal SAR limits for cell phones. In contrast to the FCC position, an independent analysis by the EPA scientists concluded, on the basis of the same body of data, that biological effects occur at SAR levels of 1 W/kg, 4 times lower than the level chosen by IEEE (U.S. EPA 1984). The EPA’s Science Advisory Board reviewed the draft EPA report twice prior to publication. The Science Advisory Board concluded that the report “represents an adequate statement of the current scientific literature and can serve as a scientifically defensible basis for the Agency’s development of radiation protection guidance for use by Federal agencies to limit exposure of the general public to radiofrequency radiation” (SAB 1984).

Based on the EPA analysis, a point of departure at 1 W/kg SAR may well be a more scientifically defensible hazard level that should be used for determining legally acceptable exposure limits. In fact, the EPA scientist in charge of editing the 1984 report, D.F. Cahill, published a peer-reviewed paper where he indicated that SAR of 0.4 W/kg is likely to be a conservative threshold point (Cahill 1983), 10 times lower than the departure point chosen by IEEE. This conclusion is supported by a growing body of studies from researchers world-wide that observe biological effects of cell phone radiation at SAR values significantly below the limits adopted by FCC (reviewed in (BioInitiative 2007; Independent Expert Group on Mobile Phones (IEGMP) 2000)).

Of note, the IEEE-recommended SAR of 4 W/kg as the point of departure for adverse health effects corresponds to short-term exposure and does not take into account long-term or chronic exposure (RFIAWG 1999). Thus, the existing FCC cell phone standard may well be insufficient for protecting human health from potential effects of life-long use, especially for susceptible populations such as young children.

Slim margin of safety provided by the current FCC standards

The FCC standards, adopted from the 1992 IEEE recommendation, are not based on a comprehensive risk assessment and fail to provide a reasonable margin of safety for exposure to cell phone radiation. Assuming a conservative, and likely overestimated departure point for health effects at an SAR value of 4 W/kg, the exposure standard for the head, at 1.6 W/kg, has only a 2.5-fold margin from the level that produced adverse behavioral effects even though it is possibly the most sensitive part of the human body, while exposure to hands, wrists, feet, and ankles at 4 W/kg, has no safety margin whatsoever. Moreover, as discussed above, children aged 5-8 may receive twice higher SAR compared to adults (Wiaart 2008), so that under the current radiation standards a young child can easily receive a level of radiation exposure at which adverse behavioral effects are observed in animals.

The approach that IEEE/FCC took to the development of the cell phone radiation standard stands in stark contrast to the risk management approach practiced by the Environmental Protection Agency (EPA). According to EPA, protective reference values should be derived in a way that accounts for both the uncertainty and the variability in the data available (U.S. EPA 2008). In this framework, variability refers to heterogeneity or diversity in the human population, such as different exposure frequencies and duration and differences in response such as genetic or age-specific difference in vulnerability to a particular physical, chemical, or biological agent. Further, uncertainty is typically due to a paucity of available information, for example, for extrapolation from animal data to humans, extrapolating from short-term to chronic exposure and lack of information on all health endpoints affected by the exposure (NRC 2008a; U.S. EPA 2002). To account for uncertainty and variability, one of several, generally 10-fold, default factors are used in EPA risk assessments for operationally deriving the reference exposure values from experimental data (U.S. EPA 2009).

The goal of applying the uncertainty/variability factors for developing general population exposure standards is to ensure that an adequate margin exists to protect infants, young children, and other vulnerable populations from harmful exposures. The choice of specific uncertainty factors (UF) depends on the quality of the studies available and the extent of the research database. EPA has developed certain general principles that apply to most risk assessments (U.S. EPA 2002):

- Interspecies UF accounts for different sensitivity between humans and laboratory test species; it generally falls between 3 and 10, but factors more than 10 might also be applied;
- Intraspecies UF accounts for variability in response between different people; this factor is generally set at 10 and needs to be higher so as to specifically protect children;
- Subchronic-to-chronic duration UF is typically set at a default value of 10 whenever the results of a short-term exposure study are used to derive a long-term exposure standard;
- Finally, for certain exposures during the vulnerable period of development, such as exposure of young children to pesticides, an additional safety factor of 10 is used (mandated under Food Quality Protection Act of 1996).

Of note, the development of the IEEE standard did not involve risk assessment and uncertainty factor considerations as applied by the EPA. A statement from a recent review on the history of the standard is very telling: “to account for uncertainties in the data and to increase confidence that the limits are below levels at which adverse effects could occur, somewhat arbitrary safety factors (typically 10-50) are applied to the established threshold” (Osephchuk 2003).

As described by the IEEE 2005 “Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields”, IEEE applies a safety factor of 10 for whole body exposure and adds an additional factor of 5 so as to “recognize public concerns and take into account uncertainties in laboratory data and in exposure assessment” (IEEE 2006). Why a factor of 5 and not 10, the default factor typically used by EPA in cases of uncertainty (U.S. EPA 2002)? According to IEEE, the International Committee on Electromagnetic Safety determined that “an additional factor of 10 was likely excessive and a factor of 2 not sufficiently differentiating from the upper tier” (IEEE 2006). IEEE has argued that even this 5-fold factor may be excessive and unnecessary and that exposure limits for the general population need to be set at the same higher level as for occupationally exposed people in the workplace (IEEE ICES 2002; Microwave News 2001). IEEE based this recommendation on an untested hypothesis that there would be no difference in sensitivity of different population subgroups to electromagnetic radiation (IEEE ICES 2002).

In its assessment, IEEE has sanctioned a 20-fold higher SAR values for the head (1.6 W/kg) than the whole-body exposure (0.08 W/kg). There are no scientific data to support this decision. As indicated in the authoritative assessment from the Radiofrequency Interagency Work Group (RFIAWG), a task force that included the National Institute for Occupational Safety and Health (NIOSH), EPA, FCC, Occupational Safety and Health Administration (OSHA), and the National Telecommunications and Information Administration, the brain may well be the most sensitive part of the human body with respect to radiofrequency radiation, and would require a more and not less protective standard (FDA 2008a; RFIAWG 1999).

Over the past several years, IEEE has been pressuring FCC to further relax the SAR standard for mobile phones, so that greater energy absorption into the head would be legally permitted (IEEE ICES 2002; Li 2006; Lin 2006; Microwave News 2001; Silva 2002). As promoted by the IEEE, the new upper limit for exposure to the head would be 2 W/kg instead of the FCC limit of 1.6 W/kg (IEEE 2006). The new IEEE standard (2006) also proposed to increase allowed SAR levels for the ear (“pinna”) from 1.6 W/kg to 4/0 W/kg, the same as current standards for hands, wrists, feet and ankles (IEEE 2006).

IEEE also proposed to switch to a method of SAR determination that involves averaging absorbed radiation over 10 g of tissue (IEEE 2006), even though it is well known that averaging over a greater volume tends to underestimate the SAR value by a factor of 2-3 (Cardis 2008; Gandhi 2002). Although so far this proposal has not been adopted by the FCC, in the past FCC had a disconcerting track record of accepting IEEE recommendations without peer review by an independent body of scientific experts (GAO 2001; Lin 2006).

U.S. cell phone certification is primarily carried out by private industry organizations

Cell phones certified by FCC for use in the U.S. must be shown to comply with the legal SAR limits. Yet, cell phone manufacturers opposed public SAR disclosure until 2000, when the FCC began posting cell phone SAR values on its web site (Lin 2000). After the FCC decision, the Cellular Telecommunications Industry Association (CTIA) began requiring manufacturers to disclose cell phone SARs.

It takes effort and persistence to locate the radiation emission (SAR) value for a cell phone either on the manufacturer's website or in the FCC database. There is no standard format for SAR disclosure by the manufacturers, so a search can be very time consuming. According to CTIA guidelines, a mobile phone SAR value must be listed in the user manual or on a separate sheet. The trade association does not require listing the SAR value on the box or the phone itself (Microwave News 2000).

The FCC Office of Engineering and Technology (OET) is the main division within the FCC responsible for cell phone certification and oversight of all radiofrequency equipment in general. FCC has several equipment approval programs, all of which involve the use of the private sector to varying degrees, including:

- **Verification** (self-approved by the manufacturer). According to 47CFR 2.902, "Verification is a procedure where the manufacturer makes measurements or takes the necessary steps to insure that the equipment complies with the appropriate technical standards. Submittal of a sample unit or representative data to the Commission demonstrating compliance is not required unless specifically requested by the Commission"
- **Declaration of Conformity** (manufacturer self-approved using an accredited lab). According to 47CFR 2.906, "Declaration of Conformity is a procedure where the responsible party, as defined in Sec. 2.909, makes measurements or takes other necessary steps to ensure that the equipment complies with the appropriate technical standards. Submittal of a sample unit or representative data to the Commission demonstrating compliance is not required unless specifically requested."
- **Certification.** According to 47CFR 2.906, "Certification is an equipment authorization issued by the Commission, based on representations and test data submitted by the applicant".

Certification of a cell phone or any other type of device can be approved by the FCC or a Telecommunication Certification Body (TCB), which is a private industry certification organization. As described in 47CFR 2.960, "The Commission may designate Telecommunication Certification Bodies (TCBs) to approve equipment as required under this part. Certification of equipment by a TCB shall be based on an application with all the information specified in this part. The TCB shall process the application to determine whether the product meets the Commission's requirements and shall issue a written grant of equipment authorization. The grant shall identify the TCB and the source of authority for issuing it."

According to the FCC, "A TCB is a private organization, which is authorized to issue grants, within its scope of designation, for equipment subject to the FCC's certification procedure. Under these rules, a TCB has the authority to review and grant an application for certification to the FCC rules" (FCC OET 2008f). Examples of devices that can receive certification either through the FCC or through a TCB include cell phones; radiofrequency lights; microwave ovens; family radio; telemetry transmitters; walkie talkies (FCC OET 2008c). Of note, the rules for FCC-TCB interaction are not listed in 47CFR. As described by an FCC representative in a conversation with EWG on April 1, 2009, FCC-TCB interaction is a "constantly developing process." Typically, FCC gives new guidelines to TCBs on an ongoing basis, usually in the format of TCB workshops held 2-3 times a year (FCC OET 2005a, b, 2006, 2008a).

Considering the widespread use of cell phones and other wireless communication devices, it is surprising that the vast majority of them do not undergo direct FCC review. FCC has defended the use of the private sector for certification and issuing grants of equipment authorization, stating that in the Agency's opinion, a private certification system allows for rapid adjustment to changing technology with shorter product life cycles; faster product approvals; access to technical expertise and ability to certify equipment; increase in resources performing conformity assessment; efficiencies in designing and approving products in the same geographic location; as well as reduced uncertainty and delay in obtaining certification (FCC OET 2005a). However, multiple issues of oversight, conflict of interest, adequate auditing and public disclosure hamper the transparency of the TCB certifications (GAO 2001).

In the TCB process, the manufacturer, an accredited lab, or a TCB can test the SAR value of a sample phone. A TCB then reviews the mobile phone test data and application for compliance. The application must demonstrate concordance with the FCC limits (47CFR2.1093(d)) for the phone to receive equipment authorization. If the review is favorable, TCB enters the product into the FCC database and FCC issues a so-called "grant of equipment

authorization” within a few days. The TCB uploads supporting information to the FCC site electronically and FCC does not review the materials before the grant of equipment authorization is issued. The manufacturer pays application fees to the TCB fees but not the FCC (FCC OET 2005a, 2008g).

A path for manufacturer application directly to FCC also exists. This path involves FCC fees, FCC examiner review and FCC engineer review. If no problems or questions arise during the FCC review, the agency issues a grant of equipment authorization in about 30-45 days from when the application was received; the process may be delayed depending on potential FCC queries (FCC OET 2005a).

Over 100 FCC-recognized TCBs exist in the U.S. alone, and the number of international FCC-recognized TCBs is much greater (FCC OET 2009). While statistics specific for mobile phones’ equipment authorization are not publicly available, in 2005, from over 7000 applications for radiofrequency equipment authorization, fewer than 1000 grants were authorized by the FCC and the rest of the applications were authorized by TCBs (FCC OET 2006). In 2006 and 2007, the number of TCB-authorized applications continued to rise to over 9000 in 2007, while the number of FCC-authorized applications remained around 500 (~ 5% of the total) (FCC OET 2008e). Specific statistics for cell phones are not available. However, statements from TCB suggest that majority of cell phones go through TCB certification, as illustrated by a representative quote from the website of Intertek, an accredited TCB:

“The FCC has designated Telecommunication Certification Bodies (TCB) to certify products for the FCC in a shorter timeframe, allowing manufacturers like you to get to market quicker. Intertek is a TCB and can help you with your FCC testing and certification in less than half the time it takes the FCC.... Partnering with Intertek for both FCC Testing and FCC Certification saves both time and money... We have expert TCB reviewers throughout the United States and Asia, enabling fast, simple, and convenient FCC testing and certification for manufacturers around the globe... Our reviewers have undergone detailed TCB training from the FCC, and they maintain a continuing education program with the FCC to stay abreast of any changes that may occur to any Part of the Rules. Each reviewer has had significant hands-on experience performing FCC tests and preparing their own applications to the FCC. We can issue your certification within days, not months. The FCC currently averages 35 days to issue certification. Since time-to-market is such a critical factor, that’s a risk not worth taking. With TCB reviewers around the world and direct links to forms and guides to help you with the process, Intertek is the answer for quick and accurate FCC testing and certification.” (Intertek 2009)

While the FCC has authority to audit any grants of equipment authorization and conduct its own verification, this happens very rarely. In 2005, FCC established an Audit and Compliance Branch within the OET Laboratory Division in order to test and evaluate various types of authorized equipment and perform TCB audits (FCC OET 2005b, c, 2008d). Initially, the Audit and Compliance branch was tasked with auditing 20% of TCB Grants; sampling and testing 2% of of the total number of products approved by TCB for a given year (FCC OET 2005b). This degree of oversight was soon found by the Commission to be insufficient and, in October 2008, FCC introduced a new set of rules for internal auditing programs that TCBs need to carry out (FCC OET 2008a). The surveillance sample amount was raised to 5% of authorized equipment, including 1% of grants for wireless devices that are subject to SAR measurements (FCC OET 2008a).

TCBs are also required to conduct post-market surveillance, auditing at least 5% of the total number of products certified by the TCB. For post-market testing, TCBs can obtain samples by requesting a grantee to submit a sample of the product certified or by purchasing a sample of the product from the marketplace. The TCB must file with the FCC an annual summary of all surveillance audits performed, and TCBs are required to notify FCC if a violation is detected (FCC OET 2008h). However, as EWG found out in a conversation with FCC Auditing and Compliance Branch on April 1, 2009, FCC does not store the audit information, and TCBs are not required to submit the actual results of their audits to FCC; in fact, auditing data are considered to be TCB's proprietary information.

Under the 47CFR rules and regulations, FCC can request a TCB to provide reports of surveillance activities carried out by the TCB or to test samples of products certified by the TCB. Occasionally, FCC conducts independent testing, usually in response to a complaint from the field. If a non-compliance or violation instance is detected, such as inappropriate radiofrequency channel use or electromagnetic interference with medical devices (FCC 2009; FCC OET 2008a, h), the FCC Enforcement Bureau (<http://www.fcc.gov/eb/>) has the authority to issue a wide range of sanctions (FCC OET 2008a). In a conversation with EWG on April 1, 2009, FCC officials indicated

that cell phone radiation emissions are generally not a subject of violations enforcement, since, in the opinion of FCC, these types of issues are resolved during the TCB/FCC certification process.

Cell Phone Radiation Science Review

Section 3: Government Action on Cell Phone Radiation Levels

Worldwide, scientists, public health experts, and many government agencies are making recommendations for children to avoid using cell phones and generally for cell phone users to aim towards lower radiation exposure (Leitgeb 2008; Mead 2008). Recommendations from government agencies of several countries and international organizations are summarized below.

Country	Agency or Organization	Recommendations on restricting children's cell phone use	Headset recommendation	Other recommendations
Switzerland	Federal Office of Public Health (FOPH 2009c)	"Either keep your calls short or send a text message (SMS) instead. This advice applies especially to children and adolescents."	"Use a wireless hands-free system (headphone, headset) with a low power Bluetooth emitter to reduce radiation to the head."	"When buying a mobile phone, make sure it has a low SAR." "Whenever possible, only use your phone when the signal quality is good." "Be wary of radiation shields and other such protective devices that are claimed to limit exposure to radiation. They may reduce the connection quality and therefore force the phone to transmit at a higher output power."
Germany	Federal Office for Radiation Protection (Bundesamt für Strahlenschutz (BfS) 2008d)	Exposure minimization for children and youngsters.	Best to use a headset instead of talking directly into the cell phone.	Use a landline telephone whenever available. Use cell phones with a low SAR value (<0.6 W/kg). Avoid making calls on a cell phone (or make shorter calls) when phone has a weak signal. Send an SMS instead of calling. (translated from German)
France	Legislation being developed by the French Senat and the Ministry of Health and Sports (Ministère de la Santé et des Sports 2009; Sénat français 2009)	Under the new legislation, "all public communication, whatever the means or support, that aim, directly or indirectly to promote sale, availability or use of cell phones by children younger than 12 years old would be prohibited. Sale or free distribution of products containing radiofrequency devices and aimed specifically for use by children younger than 6 years of age may be forbidden by order of the Health Minister, in order to limit excessive exposure of children." (translated from French)	Under the new legislation, "radiofrequency devices that would be connected to any public cell phone service provider may not be sold without an accessory device that would allow limiting head exposure to radiofrequency waves." (translated from French)	

Israel	Ministry of Health (2008)	Limiting children's use of cell phones	Use wired earpieces	Avoid cellular communication in enclosed places such as elevators and trains. (translated from Hebrew in (Azoulay 2008))
United Kingdom	Department of Health (2005)	"UK Chief Medical Officers strongly advise that where children and young people do use mobile phones, they should be encouraged to: use mobile phones for essential purposes only; keep all calls short - talking for long periods prolongs exposure and should be discouraged."		"Keep your calls short." "Consider relative SAR values when buying a new phone."
Canada	The city of Toronto's Department of Public Health (Toronto Public Health 2008a, 2008b)	"Given that cell phones are in increasingly common use by children and youth ages 10 to 19 years, it is prudent to continue to direct messages to the public so as to avoid unnecessary exposure to RFs [radiofrequencies] among young people." "While cell phones are important for communication and for safety reasons, parents should be aware of what they can do to reduce any risks from their child's use of a cell phone." "Today's children have started to use cell phones at a younger age, therefore their lifetime exposure to cell phone RFs will likely be greater. As a result, the chances that a child could develop harmful health effects from using a cell phone for a long time may be greater."	"Toronto Public Health is recommending that children, especially pre-adolescent children, use landlines whenever possible, keeping the use of cell phones for essential purposes only, limiting the length of cell phone calls and using headsets or hands-free options, whenever possible."	"Parents who buy cell phones for their children should look for ones with the lowest emissions of RF [radiofrequency] waves." "When cell phone reception is low (this happens when the base station antenna is far away) and when a cell phone is being used during high speed travel (i.e. driving in a car) power being emitted from the cell phone must be increased in order to maintain reception. Cell phone use by children should be limited during these times in order to reduce exposure to RFs."
Finland	Finnish Radiation and Nuclear Safety Authority (Säteilyturvakeskus (STUK) 2009)	"It would be good to restrict children's use of mobile phones." "Precaution is recommended for children as all of the effects are not known."	"Parents are recommended to guide their children to use a hands-free that minimises the exposure of head significantly. When using a hands-free it is recommended to keep the mobile phone at least a few centimetres away from the body."	"Parents are recommended to advise their children to use rather SMS messages than mobile phone calls." "Parents may restrict the number of their children's mobile phone calls and their duration." "STUK does not find it justifiable to totally prohibit children's use of mobile phones. Mobile phones also create safety because they make children's communication with parents easier."

Russia	Russian National Committee on Non-ionizing Radiation Protection (2008)	"Potential risk for the children's health is very high." "The current safety standards for exposure to microwaves from the mobile phones have been developed for the adults and don't consider the characteristic features of the children's organism."		"Ultimate urgency to defend children's health from the influence of the EMF [electromagnetic fields] of the mobile communication systems."
European Parliament		"[The Parliament notes] that the limits on exposure to electromagnetic fields which have been set for the general public are obsolete. They do not take account of developments in information and communication technologies or vulnerable groups, such as pregnant women, newborn babies and children. The plenary therefore calls on the Council... to set stricter exposure limits for all equipment which emits electromagnetic waves in the frequencies between 0.1 MHz and 300 GHz" (European Parliament 2008b).	"Use of hands-free kits"	"A wide-ranging awareness campaign to familiarise young Europeans with good mobile phone techniques, such as the use of hands-free kits, keeping calls short, switching off phones when not in use (such as when in classes) and using phones in areas that have good reception" (European Parliament 2009).
United States	Food and Drug Administration (FDA) Office of Women's Health (FDA 2007)			"Cell phones should expose people to the least RF [radiofrequency radiation] possible." "People who use cell phones need to be told of any bad effects."

Recommendations from governments and international agencies

Switzerland

For personal cell phone use, the Swiss Federal Office of Public Health (FOPH) states: "The effects of radiation from mobile telephony on brain function and the occurrence of brain tumours are currently under investigation. Until such time as reliable research findings are available, it is advisable to minimize exposure of the head to radiation" (Swiss Federal Office of Public Health 2009c). Swiss FOPH advises to:

- Use a wireless hands-free system (headphone, headset) with a low power Bluetooth emitter to reduce radiation to the head.
- When buying a cell phone, make sure it has a low SAR.
- Either keep your calls short or send a text message (SMS) instead. This advice applies especially to children and adolescents.
- Whenever possible, only use your phone when the signal quality is good.
- People with active medical implants should keep their cell phone at least 30 cm away from the implant at all times.

With respect to overall exposure to cell phone radiation in the radiofrequency range in the entire Switzerland, since 1999 public exposures to emissions in 900 MHz range have been restricted to 4 V/m (6 mW/cm²), while exposures in 1800 MHz range have been restricted to 6 V/m (10 mW/cm²).

Germany

For the past several years, the German Federal Office for Radiation Protection (Bundesamt für Strahlenschutz, BfS) has been advocating a cell phone SAR safety level of 0.6 W/kg (BfS 2008b). As part of this process, a "Blue Angel" eco-seal has been developed for low-emission cell phones (Blaue Engel 2008). In 2008, BfS estimated that approximately 30% of cell phones in the German market have emissions at or below 0.6 W/kg (BfS 2008b).

BfS recommends a precautionary approach to cell phone use for children, such as using a landline; making shorter cell phone calls; avoiding using a cell phone when the connection is weak; and, as much as possible, using a headset and substituting text messaging instead of making a call (BfS 2008d). BfS has also recommended the same precautions for adult cell phone users, additionally including a recommendation for purchasing cell phones with low SAR values (BfS 2007).

France

The French Senat is now considering legislation restricting the use of cell phones for children, including a ban on the advertising of cell phones to children under the age of 14, ban on sales of phones intended for use by children under the age of 6. The new legislation will also require all handsets to be sold with accompanying headsets (Bremner 2009; Le Monde 2009; Ministère de la Santé et des Sports 2009; Sénat français 2009).

Israel

In 2008, Israel's Ministry of Health stated that although it is still not clear whether cell-phone use is connected to an increased risk of developing cancerous growths, current research already supports a policy of "preventive caution" (Israel Ministry of Health 2008). The Ministry published a set of guidelines that called for limiting children's use of cell phones, avoiding cellular communication in enclosed places such as elevators and trains, and using wired, not wireless, earpieces (Azoulay 2008). The Ministry developed these guidelines following a national study that detected an association between cell phone use and the risk for developing tumors of the salivary gland (Sadetzki 2008; Traubmann 2007).

United Kingdom

The UK Department of Health supports "a precautionary approach" to the use of cell phones until more research findings become available. 2000 and 2005 editions of the Department of Health publication "Cell Phones and Health" stated that where children and young people do use cell phones, they should be encouraged to:

- Use cell phones for essential purposes only;
- Keep all calls short - talking for long periods prolongs exposure and should be discouraged.

The UK Chief Medical Officers recommend that if parents want to avoid their children being subject to any possible risk that might be identified in the future, the way to do so is to exercise their choice not to let their children use cell phones (UK Department of Health 2005).

The UK Department of Health further stated in its publication "Government Response to the Report from the Independent Expert Group on Cell phones (Stewart Group)": "Consumer should have access to the SAR values when considering purchasing a cell phone. The Government will expect SAR measurements to be displayed at all points of sale and with each cell phone and on the world wide web. The Government considers that the SAR value should be viewed in context, for example, by comparing the SAR value against the recommended exposure limits" (UK Department of Health 2004).

Finland

In January 2009, the Finnish government stated that children's cell phone use should be restricted, for example, by sending text messages instead of talking, making shorter calls, using a hands-free device, and avoiding the use of cell phones when connection is weak. According to the Finnish report, "although research to date, has not demonstrated health effects from cell phone's radiation, precaution is recommended for children as all of the effects are not known" (STUK (Finnish Radiation and Nuclear Safety Authority) 2009).

Regarding the current studies on cancer risk of cell phone use, Finnish government concluded that while “on the grounds of the studies to date, it is not possible to make such a conclusion that cell phones would cause a health risk... Since it takes years to develop a cancer and cell phones have been in common use only for about ten years, the possibility, that a link between cell phone use and cancer might be found in later population studies, cannot be ruled out” (STUK (Finnish Radiation and Nuclear Safety Authority) 2009).

Italy

In 2001-2003, Italy set an exposure limit of 60 V/m and a quality goal of 6 V/m for broadcast and cell phone transmitters in buildings where people work for more than four hours per day.

The European Parliament

The European Parliament resolution on the mid-term review of the European Environment and Health Action Plan 2004-2010, approved on September 4, 2008 by 522 votes to 16, recommended stricter exposure limits for cell phones and other wireless devices. The Action Plan review included a key section on wireless technology:

“[The Parliament notes] that the limits on exposure to electromagnetic fields which have been set for the general public are obsolete. They do not take account of developments in information and communication technologies or vulnerable groups, such as pregnant women, newborn babies and children. The plenary therefore calls on the Council... to take into account the Member States' best practices and thus to set stricter exposure limits for all equipment which emits electromagnetic waves in the frequencies between 0.1 MHz and 300 GHz” (European Parliament 2008b).

Article 22 of the 2008 Resolution highlights the importance of the precautionary approach supported by the European Environment Agency and promotes adoption of the stricter emission standards such as those developed in Belgium, Italy and Austria (European Parliament 2008a).

The European Parliament resolution on “Health concerns associated with electromagnetic fields” (INI/2008/2211), adopted by 559 votes to 22 on 2 April 2009, called for bringing greater transparency to the radiofrequency radiation exposure and for adoption of precautionary measures. The resolution stated:

- Wireless technology (cell phones, Wi-Fi/WiMAX, Bluetooth, DECT landline telephones) emits EMFs that may have adverse effects on human health. Most European citizens, especially young people aged from 10 to 20, use a cell phone, while there are continuing uncertainties about the possible health risks, particularly to young people whose brains are still developing.
- The scientific basis and adequacy of the EMF limits should be reviewed by the European Commission.
- As well as, or as an alternative to, amending European EMFs limits, the Commission, working in coordination with experts from Member States and the industries concerned, should draw up a guide to available technology options serving to reduce exposure to EMFs.
- EU member states should make available to the public, maps showing exposure to high-voltage power lines, radio frequencies and microwaves, and especially those generated by telecommunications masts, radio repeaters and telephone antennas. That information should be published on the internet.
- A wide-ranging awareness campaign should be initiated to familiarize young Europeans with good cell phone techniques, such as the use of hands-free kits, keeping calls short, switching off phones when not in use (such as when in classes) and using phones in areas that have good reception.

U.S. Food and Drug Administration Office of Women's Health

FDA Office of Women's Health released a publication in 2007 offering several recommendations:

- “More studies on cell phone RF [radiofrequency radiation] are needed.”
- “Cell phones should expose people to the least RF possible.”
- “People who use cell phones need to be told of any bad effects.”

International Commission on Non-Ionizing Radiation Protection (ICNIRP) Statement on EMF Emitting New Technologies (ICNIRP 2008):

"Recent developments in telecommunication and wireless technology have led to increasing numbers of new devices and systems that emit radio frequency (RF) electromagnetic (EM) energy. Implementing these developments has resulted in large numbers of individuals at the workplace or in the general public being exposed to RF-EMFs... There are questions being posed about health effects associated with exposure to these new systems and devices, which have not been tested per se in terms of health risks. They may have signal characteristics that are unique and different from the currently used technologies, and they may also cause the total level of exposure to rise because of the superposition of electromagnetic fields (EMFs) emitted by new and existing sources."

BioInitiative Report

In 2007, the BioInitiative Working Group, an international collaborative group of radiation scientists, cancer researchers and public health policy professionals issued the "BioInitiative Report: A Rationale for a Biologically-based Public Exposure Standard for Electromagnetic Fields (ELF [extremely low frequency electromagnetic fields] and RF [radiofrequency radiation])." The report highlighted extensive concerns about the safety of existing electromagnetic field radiation limits for power lines, cell phones, and many other sources of electromagnetic radiation exposure in daily life. The BioInitiative group urged for development of "new public safety limits and limits on further deployment of risky technologies" (BioInitiative 2007).

The Russian National Committee on Non-Ionizing Radiation Protection

According to the 2008 report from the Committee, children younger than 18 years of age may face increased health risks from cell phone radiation, since:

- Absorption of the electromagnetic energy in a child's head is considerably higher than that in the head of an adult because children's brain has higher conductivity, smaller size, thin skull bones, and due to smaller distance from the antenna;
- Child's organism is more sensitive to the EMF compared to adult's;
- Developing brain has higher sensitivity to the accumulation of the adverse effects under chronic exposure to the EMF;
- EMF affects the formation of the process of the higher nervous activity;
- Today's children will spend longer time using cell phones than today's adults.

As a result, in the opinion of the Committee, children are likely to face the following health hazards following long-term exposure: "disruption of memory, decline of attention, diminishing learning and cognitive abilities, increased irritability, sleep problems, increase in sensitivity to the stress, increased epileptic readiness" (Russian National Committee on Non-Ionizing Radiation Protection 2008).

European Environment Agency (EEA)

EEA stated that "precautionary and proportionate actions taken now to avoid plausible and potentially serious threats to health from EMF are likely to be seen as prudent and wise from future perspectives" (EEA 2007).

TCO certification program, Sweden

TCO Development, a standard-setting group owned by the Swedish Confederation of Professional Employees, develops product certifications for various types of office and electronic equipment. TCO certification program recommends a cell phone SAR value below 0.8 W/kg (TCO 2001). <http://www.tcodevelopment.com/>

Austrian Institute for Applied Telecommunications (Österreichische Institut für angewandte Telekommunikation (ÖIAT))

The Austrian Institute for Applied Telecommunications in co-operation with the Austrian Federal Chancellery, the Federal Ministry for Social Security, Generations and Consumer Protection, and Mobilkom Austria developed an information website, Handywissen.at, with recommendations for cell phone use. While the ÖIAT does not consider that the current state of science indicates health risks from cell phones, their website provides tips for the cell phone users such as:

- If possible, do not make phone calls when the signal quality is poor (as displayed by the number of bars on the phone). If the reception is poor, the cell phone automatically increases radiation strength to transmit the signal.

- Use hands-free equipment (headset). Regardless of whether a wired head set or Bluetooth is used - headsets reduce the radiation exposure to the head from the cell phone.
- Attention: radiation protection products (for example, a cell phone sticker) are mostly counterproductive or have no physical effect.
- Use cell phone models with a low SAR value.
- For shorter information exchange, send SMS.
- Radiation emitted by the cell phone is highest in the first moment of establishing connection. Bring the cell phone to the ear after the person on the other end of the line responds (Austrian Institute for Applied Telecommunications 2008). (translated from German)

Eurobarometer survey

In 2006-2007, the European Commission Directorate General for Health and Consumer Affairs commissioned a survey of public perception of health risks associated with electromagnetic fields. The survey found:

- Two-thirds (65%) of EU citizens are not satisfied with the information that they receive about potential health risks linked to EMF and consider available information “insufficient.”
- Across the European Union, the vast majority (80%) of citizens do not feel that they adequately informed on the existing protection framework relating to potential health risks of electromagnetic fields.
- Majority (60%) of the European public does not consider public authorities to be efficient enough in protecting them from potential health risks.

Cities taking action

Toronto, Canada

In 2008, the Toronto's Department of Public Health stated: “Research on the health effects from cell phone RFs on children is very limited since the use of cell phones by young people is a relatively new trend. Scientists are not yet sure what the health effects in children are from using a cell phone. While research continues in this area, some scientists feel that children may be more susceptible to harmful effects of RFs from cell phones for several reasons:

- Pre-teen children have a smaller head and brain size, thinner skull bones, skin and ears.
- Their nerve cells also conduct energy like RFs more readily than an adult's or teenager's nerve cells.
- Children's brains and nerves are also still developing so they are likely to be more sensitive to exposures of RFs.

Today's children have started to use cell phones at a younger age, therefore their lifetime exposure to cell phone RFs will likely be greater. As a result, the chances that a child could develop harmful health effects from using a cell phone for a long time may be greater” (Toronto Public Health 2008b).

“Children, especially pre-adolescent children, use landlines whenever possible, keeping the use of cell phones for essential purposes only, limiting the length of cell phone calls and using headsets or hands-free options, whenever possible (Toronto Public Health 2008a)”. “Parents who buy cell phones for their children should look for ones with the lowest emissions of RF waves... When cell phone reception is low (this happens when the base station antenna is far away) and when a cell phone is being used during high speed travel (i.e. driving in a car) power being emitted from the cell phone must be increased in order to maintain reception. Cell phone use by children should be limited during these times in order to reduce exposure to RFs” (Toronto Public Health 2008b).

Brussels, Belgium

In 2007, the Brussels Capital-Region of Belgium adopted a maximum limit for exposure to 900 MHz frequency radiation in all publicly accessible zones at 0.024 W/m² (corresponds to electric field strength of 3 V/m), significantly lower than the FCC maximum permissible exposure (Centre Démocrate Humaniste (cdH) 2007; Parlement de la Région de Bruxelles-Capitale 2007). While the majority of GSM cell phone towers in Belgium transmit at levels below 3V/m, certain stations transmit at significantly higher levels, up to 25 V/m (Belgian Institute for Postal Services and Telecommunications 2009). Following the regional Brussels decision in 2007, the cell phone operators and the Belgian federal Health Ministry jointly challenged the 3V/m rule in court. In January 2009, the Belgian Constitutional Court ruled that individual regions of Belgium have a right to set more strict

radiation emissions standards to protect the health of their citizens (Ecolo 2009; Huytebroeck 2009a). The 3 V/m measure is set for implementation in the Brussels region from September 2009 (Huytebroeck 2009b).

Salzburg, Austria

In 2000, the city of Salzburg has adopted a "precautionary strategy" by setting the maximum exposure level for GSM (Global System for Mobile communications) cell phone base stations at 0.1 mW/cm².

Christchurch, New Zealand

Christchurch Council in New Zealand established a public exposure limit for radiofrequency radiation at 2 mW/cm². The standard was challenged in a lawsuit but was upheld by the judge of the South New Zealand Environment Court.

United States: The National Research Council report and research by the National Toxicology Program

In 2008, the National Research Council of the National Academies issued a report, "Identification of Research Needs Relating to Potential Biological or Adverse Health Effects of Wireless Communication". According to the report, outstanding research needs in the area of cell phone health effects include: 1) characterization of exposure to potentially vulnerable populations such as children, pregnant women and the developing fetus, and people with special sensitivities; 2) prospective epidemiological studies of childhood cancers, including brain cancer, and their potential relationship with cell phone use; 3) human laboratory studies that focus on possible adverse effects on electric potentials (brain waves) and neural networks in various parts of the brain; 4) ongoing research of potential biophysical, biochemical, and molecular mechanism of radiofrequency radiation action on living tissue; 5) dosimetry studies with different cell phones and other types of wireless devices and the SAR that they can deliver to different parts of the body (NRC 2008b). FDA has been an official partner with the National Research Council in identifying outstanding research needs in cell phone exposure and health effects research (FDA 2008b).

The National Toxicology Program, in collaboration with several academic centers across the U.S. and internationally, is now developing a large-scale, long-term series of studies to examine the health effects of cell phone radiation in experimental animals (both mice and rats) (Capstick 2008; McCormick 2008; Melnick & Portier 2005). The study partners include the IIT Research Institute (Chicago) and the Foundation for Research on Information Technologies in Society (IT²S, Switzerland), with animal exposure system operation independently validated by U.S. National Institute of Standards and Technology (NIST, Boulder, CO).

The NTP studies will re-examine the thermal effects of radiofrequency exposure on animals, analyze the health effects of the perinatal pre-chronic exposure (scheduled for completion in 2009), and identify any chronic toxicity or oncogenicity (scheduled for completion in 2011) (McCormick 2008). The overall objective of these studies is to determine the potential toxic and/or carcinogenic effects of exposure to cellular phone radiofrequency emissions in laboratory animals. This information would then be used to determine the adequacy of current guidelines for protecting against potential adverse effects of chronic exposure (Ball 2008).

Cell Phone Radiation Science Review

Section 4: Radiation - Bluetooth, Wired Headsets & Cordless Phones

There is a great need for publicly available information on radiation emission levels associated with cell phones. This disclosure should be done at the point of sale.

A recent market study indicated that shoppers considered the SAR value of a phone important for their safety and a key element of their purchasing decision (Wiedemann 2008). Yet, as found in a 2006 survey by the German Federal Office for Radiation Protection, only 11% of respondents considered themselves well informed on the subject of cell phone radiation (BfS 2008c).

Using a headset is one of the simple, easy steps that consumers can take to decrease their exposure to cell phone radiation. Yet, which headset to use - wired or wireless? The research below discusses the latest science on the subject.

Bluetooth radiation emissions

According to findings and recommendations by government agencies and researchers in different countries, the use of Bluetooth headsets with cell phones decreases the overall levels of SAR exposure to the head (American Cancer Society 2008; BfS 2005; Martinez-Burdalo 2009; Swiss Federal Office of Public Health 2009a).

Bluetooth wireless technology is found in a diverse range of devices, such as cell phone headsets, car speakerphones and other automotive equipment, GPS, gaming equipment, computer accessories such as printers, keyboards, and mice, PDAs (personal digital assistants), personal media players, and medical, health, and wellness devices (CNET Reviews 2009; ICNIRP 2008; Morrow 2002). Bluetooth wireless technology allows radiofrequency devices to form connections for communicating one-on-one or for creating a personal wireless network within an approximately 30-foot-radius sphere. Bluetooth devices are used in a growing number of commercial and personal applications; the Bluetooth Specialist Interest Group, an industry trade association, lists over 6000 products that utilize Bluetooth technology (Bluetooth Special Interest Group 2009).

Bluetooth transmitters operate at frequency around 2.4 GHz. Bluetooth devices are assigned to one of three power classes: 1, 2 and 3. Class 2 transmitters – most commonly found in mobile devices – have a range of 30 feet (10 meters) and operate at 2.5 mW peak transmission power; class 3 devices are weaker than class 2, operating at peak transmission power of 1 mW in a range of less than 10 meters. Class 1 transmitters are the most powerful, with a range of 300 feet and peak transmission power of 100 mW. Class 1 Bluetooth devices can cause exposure to radiation similar to that emitted by a cell phone if they are operated in the immediate vicinity of the body. Bluetooth devices are designed to limit the radiation power exactly to that actually required. When the receiving device indicates that it is a few meters away, the transmitter immediately modifies its signal strength to suit the exact range, which reduces the total emitted radiation and signal interference (IT'IS 2005).

A study commissioned by the Swiss Federal Office of Public Health (FOPH) measured SAR for several Bluetooth devices, including two different class 3 hands-free cell phone headsets. The headsets tested had SAR values of 0.001 and 0.003 W/kg, which is 34 and 12 times lower than the SAR of the lowest-emission cell phone currently available (Swiss Federal Office of Public Health 2009a).

Of note, while the Bluetooth headset reduces radiation exposure to the head, transmission strength from the phone itself is not decreased. Bluetooth headset users frequently keep their phone in a pocket or clipped to the belt, a position that leads to radiation exposure of internal organs (Whittow 2008). As stated on the FCC website, "if the phone is mounted against the waist or other part of the body during use, then that part of the body will absorb RF energy" (FCC 2008). While the health effects of this exposure have not yet been assessed, the Swiss FOPH recommended that "cell phones should not be carried in a front trouser pocket when making calls" and that it may be safest "to hold the phone away from the body to reduce radiation exposure" (Swiss Federal Office of Public Health 2009a). Furthermore, a study from the Loughborough University (U.K.) reported that realistic everyday metallic objects found near the waistline, including a coin, a ring and a zipper increased the SAR in the body at different frequencies (Whittow 2008).

In the U.S., FCC certification of Bluetooth devices does not require measuring and reporting the SAR values. Bluetooth technology falls under the list of “low-power, non-licensed radiofrequency devices” that are classified in 47CFR Part 15 (FCC 1993, 2002). According to the FCC regulations, these unlicensed devices need to comply with the maximum permissible exposure limit. As stated by FCC:

"The FCC typically does not require RF exposure test data to be submitted with a filing to demonstrate compliance. Sometimes, applicants may choose to include such test data to expedite a filing. However, sufficient information should be included to satisfy the requirements of Section 15.247(b)(4), typically specific operating and installation instructions/requirements, warning/caution instructions and/or labels when applicable. If compliance cannot be ensured or determined based on the supporting information, (the operating configurations and exposure conditions of the host and final products that would operate with the Bluetooth transmitter module.) SAR or MPE evaluation may be requested as required by Section 1.1307(d)." (FCC 2007)

Wired (corded) hands-free headsets — radiation emissions

The use of corded earpieces/headsets is listed by the American Cancer Society as one of the easy ways to decrease SAR exposure to the head and brain during a cell phone conversation (American Cancer Society 2008).

With a corded headset, the voice signal is sent electronically to the earpiece directly from the phone in a similar manner as when standard headphones are plugged into a radio or a music player (Network & Academic Computing Services of University of California Irvine 2008). Depending on the position of a wired headset cable along the body, a certain proportion of the phone output radiofrequency radiation can be transmitted along the cable and elicit measurable SAR values in the torso and the head of the user (Kuhn 2008).

In the U.S., wired headsets are not regulated and their SAR values are generally not publicly available (Carnoy 2000). Several studies examined the issue of corded headsets safety, the potential for the headset/headset wire to act as a secondary antenna, and the effects of headset wire on radiation exposure to the torso (Carnoy 2000). One conclusion is clear: radiation exposure to the head is reduced with the use of a cordless headset, according to studies from the School of Electrical & Electronic Engineering at the Queen's University of Belfast (Troulis 2003) and the University of York Department of Electronics reached similar conclusions (Porter 2004) and Motorola (Bit-Babik 2003).

The Motorola study reported that, with a headset, SAR in the head is 8 times lower than when making calls holding the phone to the ear (Bit-Babik 2003). While this is a significant decrease, some degree of radiation exposure to the head occurs nevertheless (Bit-Babik 2003), which stands in contrast to statements from wired headset manufacturers that “SAR readings at the head are virtually zero when a corded mobile headset is used” (Plantronics 2005).

Unlike the earlier publications, a 2008 study carried out in the framework of the German research program on mobile telephones found that under a worst-case scenario for use of a GSM 1800 cell phone there was an increase in the SAR value in the inner ear (Kuhn 2008). It is possible that SAR exposure to the head when using a wired headset may be dependent on the cell phone transmission frequency and the type of transmission system, although researchers concluded that when a headset is used the overall exposure in the region of the head is reduced (Kuhn 2008).

Importantly, using a corded headset does not decrease the radiation output of the cell phone, which becomes absorbed into the torso instead of the head (FCC 2008). The Troulis (2003) study reported that for a waist-mounted cell phone, absorption of radiation by the body reduces the phone's efficiency, thus increasing the required output power level. In this study, the peak 1 g SAR value was 0.450 W/kg for the phone itself, and with the hands-free wire connected, SAR increased to 1.14 W/kg. For a phone worn near the waist, this increased radiation would be absorbed into the body.

Scientific consensus has not yet been reached on whether corded or wireless headsets provide best radiation protection to the head and sensitive internal organs. Headset use has been recommended by government agencies in several countries as a way to reduce radiation exposure to the head (Switzerland, Germany, France, Israel, Austria, and the city of Toronto). According to the Swiss government, “As the brain is a sensitive organ, it is

wise to use a hands-free kit (headset), since this reduces exposure of the head to radiation” (Swiss Federal Office of Public Health 2009a). Yet, which one is best?

Israel’s Ministry of Health urges cell phone users to rely on a wired, not wireless headset; the Swiss government recommends a wireless hands-free system (headphone or a headset) with a low power Bluetooth emitter; the Austrian government recommends using either a wired or a wireless headset; the German Federal Office for Radiation Protection and the city of Toronto’s department of Public Health simply recommend the use of headsets without stating which one is preferable. The UK Department of Health stated in a 2005 publication that the level of effectiveness of hands-free kits to reduce SAR is still uncertain (UK Department of Health 2005). Recent publication from the Swiss Foundation for Research on Information Technologies in Society (IT’IS) recommended for manufacturers to conduct tests of wired headsets’ SAR values to ensure that the phone-to-headset cable does not transmit radiofrequency radiation towards the head and to the torso (Kuhn 2008).

While research on safer wireless technology is ongoing, one conclusion is clear: whether using either corded or Bluetooth headsets, it is reasonable to choose a phone with the lowest SAR value and to keep the cell phone away from the body during use.

Other common sources of radiofrequency radiation exposure

In addition to exposures from cell phones and Bluetooth devices, people are exposed to EMF radiation from a wide range of wireless devices at home and in the workplace, such as cordless home phones, baby monitors, and Wireless Local Area Networks (WLAN) (Frei 2009; Hillert 2006). Scientists at the Foundation for Research on Information Technologies in Society (IT’IS, Switzerland) reported an SAR value of 0.077 W/kg for baby monitor; 0.055 W/kg for cordless phone, and 0.81 W/kg for WLAN (IT’IS 2005). Additionally, IT’IS found that a class 1 Bluetooth USB plug-in antenna had an SAR of 0.466 W/kg, while a class 2 Bluetooth USB plug-in antenna had an SAR value of 0.0092 W/kg (Swiss Federal Office of Public Health 2009a). While research on this question is only beginning, a recent study from Spain suggested that cell phone exposures constitute the majority of radiofrequency exposure for an individual person, significantly exceeding exposure due to other wireless devices such as Bluetooth or WLAN (Martinez-Burdalo 2009).

Several studies on the association between cell phone use and cancer have raised question about the potential health impact of radiofrequency radiation from cordless home phones which is the same type of radiation as that emitted by cell phones (Hardell, Carlberg 2006b; Hardell 2003; Mild 2007). A recently published study from Switzerland found that people who owned either a cordless phone or a mobile phone received more exposure to radio frequency radiation than those not owning either type of phone (Frei 2009).

While the cordless phone handset emits radiation only during a call (same as a cell phone), radiation emission from the cordless phone base station are continuous even when no calls are made (BfS 2008a). The German Federal Office of Radiation Protection recently issued a new requirement for cordless home phone models whereby base stations must be automatically switched off when not in use or when in standby mode (BfS 2008a). The Swiss government recommended keeping cordless phone base units away from relaxation places or work stations occupied for long periods as well as using a corded phone or a headset instead of a standard cordless phone (Swiss Federal Office of Public Health 2009b).

In the U.S., the types of cordless phones and the radiofrequency range they use have changed over the years. In early 1980s, cordless phones operated with frequency of 27 MHz (Phone Warehouse 2000). In late 1980s, FCC changed the cordless phone frequency band to 47-49 MHz (Code of Federal Regulations Chapter 47, section 15.233), followed by cordless phones that operated in 900 MHz range (cell phone frequency), 2.4 GHz (frequency band also used by Bluetooth and wireless LANs) and 5.8 GHz (Pedro 2006; teqFAQ 2009). The range of a cordless phone increased with each subsequent generation; 900 MHz phones have a range of 200 to 1500 feet, while 2.4 GHz and 5.8 GHz have a range of 300 to 2000 feet (Hanks 2004). New technologies such as DECT (Digital Enhanced Cordless Telecommunications) operate in 1900 MHz (cell phone) range (Rhein Tech 2006).

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) recently recommended that public officials setting standards for EMF radiation exposure need to consider simultaneous exposure to radiation from multiple devices, such as cell phone, cordless home phone, Bluetooth, and WLAN, needs (ICNIRP 2008).

Similarly, the Swiss and German governments have recommended precaution with respect to increasing exposure to radiofrequency devices (BfS 2008a). The Swiss government stated that "caution should be exercised primarily when using devices held close to the body, such as laptops, PDAs and Internet telephones" (Swiss Federal Office of Public Health 2009d). Clearly, this question needs to be resolved with a nation-wide study of the total EMF exposure people face on a daily basis.

Rapid growth in cell phone technology

Cell phone technology is constantly developing. Currently, GSM (Global System for Mobile Communication) is a standard protocol for digital mobile communication used for phone calls and transmission of text messages. Cell phones are also used for sending data or surfing the Internet. GPRS (General Packet Radio System) and Edge (Enhanced Data Rate for Global Evolution) are further developments of GSM that can transfer data at higher rates (sometimes called 2.5 Generation systems). The new (third) generation in mobile telecommunications includes W-CDMA (Code Division Multiple Access) and UMTS (Universal Mobile Telecommunication System), which have higher data transfer rate than GSM and are better suited to data and multimedia services while providing same level of cell phone and text messaging service. It is expected that in the near future, 3G technology will supersede the GSM standard (ICNIRP 2008; Swiss Federal Office of Public Health 2009c).

GSM protocol operates at frequencies of 900 and 1800 MHz; 900 MHz protocol has a peak output power of 2000 mW and maximum output power of 240 mW. 1800 MHz protocol operates with a peak output power of 1000 mW and maximum output power of 120 mW. 3G UMTS protocol operates at transmission frequency 2100 MHz, with both peak and maximum output power in the range of 125-250 mW.

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June 24, 2009

Khurana V Hardell L Everaert J Bortkiewicz A Carlberg M Ahonen M.
Epidemiological Evidence for a Health Risk from Mobile Phone Base Stations.
Int J Occup Env Health:16- 3, JUL/SEP 2010, p 263-267.

(please excuse cross-postings)

A new study in the International Journal of Occupational Environmental Health reports increased cancer and neurological health risks from cell towers. Vini Khurana (Australia, neurosurgeon) and Lennart Hardell (Sweden, oncologist) have published a summary of ten studies that reported health effects of populations living near cell towers. They found risks for cancer and neurological disease in eight out of ten studies - within 500 meters of the cell antennas.

It is important to remember that not all cell tower antennas are the same, and the RF exposures around them can vary widely. Major macrocell sites can emit 6000 watts or more, and smaller sites can be less than 2000 watts. The distance outward from a cell tower that creates the 'zone of RF impact' needs to be assessed on a site-specific basis.

Abstract

Human populations are increasingly exposed to microwave/radiofrequency (RF) emissions from wireless communication technology, including mobile phones and their base stations. By searching PubMed, we identified a total of 10 epidemiological studies that assessed for putative health effects of mobile phone base stations. Seven of these studies explored the association between base station proximity and neurobehavioral effects and three investigated cancer. We found that eight of the 10 studies reported increased prevalence of adverse neurobehavioral symptoms or cancer in populations living at distances < 500 meters from base stations. None of the studies reported exposure above accepted international guidelines, suggesting that current guidelines may be

inadequate in protecting the health of human populations. We believe

that comprehensive epidemiological studies of longterm mobile phone base station exposure are urgently required to more definitively understand its health impact.

Key words: base stations; electromagnetic field (EMF); epidemiology; health effects; mobile phone; radiofrequency (RF); electromagnetic radiation.

The paper cites the BioInitiative Report findings and conclusions on the inadequacy of existing public health standards for cell tower radiation, and supports the BioInitiative Report recommendation (of 0.1 microwatt per centimeter squared) by citing new publications on cell tower risks.

"In August 2007, an international working group of scientists, researchers, and public health policy professionals (the BioInitiative Working Group) released its report on EMF and health.²¹ It raised evidence-based concerns about the safety of existing public limits that regulate how much EMF is allowable from power lines, cellular phones, base stations, and many other sources of EMF exposure in daily life. The BioInitiative Report²¹ provided detailed scientific information on health impacts when people were exposed to electromagnetic radiation hundreds or even thousands of times below limits currently established by the FCC and International Commission for Non-Ionizing Radiation Protection in Europe (ICNIRP). The authors reviewed more than 2000 scientific studies and reviews, and have concluded that: (1) the existing public safety limits are inadequate to protect public health; and (2) from a public health policy standpoint, new public safety limits and limits on further deployment of risky technologies are warranted based on the total weight of evidence.²¹ A precautionary limit of 1 mW/m² (0.1 microW/cm² or 0.614 V/m) was suggested in

Section

17 of the BioInitiative Report to be adopted for outdoor, cumulative RF exposure.²¹ This limit is a cautious approximation based on the results of several human RF-EMF studies in which no substantial adverse effects on well being were found at low exposures akin to power densities of less than 0.5 – 1 mW/m².^{2,5,22–26} RF-EMF exposure at distances > 500 m from the types of mobile phone base stations reviewed herein should fall below the precautionary limit of 0.614 V/m."

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For distribution:

Hello Everyone,

As some of you already know, there are several students in Mountain View School in Collingwood, Ontario (Canada) who are complaining about ill health after the school installed WiFi. Rodney, a concerned father, invited me to give a talk in the Community this past week and the room was packed with parents, health care professionals, people from the community, and the media so I hope it will generate more interest once the articles begin to appear.

See video clip of interviews with some of the students at the school. [HYPERLINK](#)

["http://www.youtube.com/watch?v=h-TJXRc5fzo&feature=player_embedded"](http://www.youtube.com/watch?v=h-TJXRc5fzo&feature=player_embedded)http://www.youtube.com/watch?v=h-TJXRc5fzo&feature=player_embedded

See video documenting tachycardia in adults during provocation with a cordless (DECT) phone.

[HYPERLINK](#)

["http://www.youtube.com/watch?v=_EI9fZX4iww"](http://www.youtube.com/watch?v=_EI9fZX4iww)http://www.youtube.com/watch?v=_EI9fZX4iww

What is disturbing is that several students have complained about ill health, two students are now on heart medication and one young girl is scheduled for heart surgery on Monday June 14th. A student in a Toronto school (also with WiFi) fainted while standing in the hallway near a WiFi antenna. The students with heart conditions have been diagnosed with one of the following: vaso vagal syndrome, supraventricular tachycardia (SVT), or Wolff-Parkinson-White (WPW) Syndrome (abnormal connections or accessory pathways in the heart) a form of atrioventricular reciprocating tachycardia (AVRT).

Symptoms for SVT include: dizziness, shortness of breath, chest pain, a pounding sensation in the throat or neck, weakness, fatigue, lightheadedness, fainting (especially in the case of underlying heart disease) and resemble EHS symptoms.

Prevalence rate for tachycardia is about 1.6% to 2% for adults. [HYPERLINK](#)

["http://www.wrongdiagnosis.com/t/tachycardia/stats.htm"](http://www.wrongdiagnosis.com/t/tachycardia/stats.htm)<http://www.wrongdiagnosis.com/t/tachycardia/stats.htm>

Prevalence for WPW is 0.15% in children. See: [HYPERLINK](#)

["http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2363719/"](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2363719/)<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2363719/> Epidemiology of Arrhythmias in Children, by R Prem Sekar. Indian Pacing Electrophysiol J. 2008 Apr-Jun; 8(Suppl. 1): S8-S13.

I recently heard that all the schools in my district (Kawartha Pine Ridge) are going to have WiFi installed soon. Where are these schools getting information that this technology is safe? I find this situation most disturbing. If these heart conditions are related to WiFi then I think the schools and those who make the statement that this radiation is safe (Health Canada and local Health Boards) are culpable.

Have received emails from several of the people who attended the presentation this past week and learned that some parents are also having heart palpitations and rapid heart rate because of WiFi in the home. They didn't know this was contributing to their heart problems and have, since the talk, disconnected their wireless devices.

Why are doctors not better informed? Anyone who suddenly experiences a heart irregularity should be asked some specific questions about whether or not they have wireless routers, cordless phones, energy efficient CFL bulbs, nearby cell towers, etc. as routine questioning. The heart problem (arrhythmia or tachycardia), which can be easily measured, may be a very important test for those who are EHS. Please spread the word and ask your friends if they experience symptoms of an irregular or racing heart and if they do ask them when it started, what changed at that time, if it is occasional-when they experience it and what they are doing about it. The more information we can gather the more impact it is going to have on school boards. Getting rid of WiFi is more difficult than preventing it from being allowed into a school in the first place.

Please distribute this email to your friends and let's get a better understanding as to how widespread this heart problem is and the degree to which it relates to wireless technology and electrosmog exposure.

Thanks for your help,

-magda

There is strength in numbers!

I am attaching and posting below our July 11, 2010 Telecommunication Taskforce Update.

Hundreds of residents came out to voice their concerns about the recent proposals to install T-Mobile antennae and/or towers at the North Merrick Library, North Bellmore Fire Department and the Farmingdale-Wantagh Jewish Center. And the MOMS of Merrick and Bellmore are really kicking up steam at school board and civic meetings. But I'd like to give special thanks to Legislator Dave Denenberg – who has been the people's advocate in the fight against cell towers near our homes and schools and a proponent for finding better locations. As the common thread among all the communities, I believe we need to work with Leg. Denenberg's office and unite to form one strong voice against the inundation of wireless telecommunication installations in all our communities.

I would also like to thank the Town of Hempstead for writing new code to address these concerns and Senator Fuschillo for looking into better locations on state property. We are very lucky to live in communities that have representatives like Legislator Denenberg and Fuschillo looking out for the best interests of the people. I am happy to see our state,

county and town government working together in a bi-partisan manner to address this problem.

And with the history and experience of the North Bellmore residents; the passion and determination of Pam Naughton and Lori Stehl and public relation skills of Jeanine Stehl of Wantagh; the perseverance and commitment of Jodi Turk and Sharon Curry who founded MOMs; Attorney Andrew Campanelli, who is giving his time and experience to fight these cell towers; the members of the Taskforce, which include Joe Baker from the South Merrick Community Civic Association, Ira Harris from the East Bay Civic Association and the people who have been putting in hours of their time; and the public outcry from the Wantagh, North Bellmore and North Merrick communities over the new cell towers – I believe we are really a force to be reckoned with. A united community can accomplish anything!!

Please review the attached update that is also posted below and look out for more emails in the next few days. We will need to meet to stop the new cell towers from being installed.

Telecommunication Taskforce Update July 12, 2010

By Claudia Borecky

It is over a year since the invasion of cellular antennas on utility poles in Merrick and we find ourselves in the same position that we were in then. The cellular antennas are still there; the Town of Hempstead should still be held accountable for not protecting its citizens; and we are still in a position where we could negotiate their relocation. Only now, we have new companies proposing to erect cell towers at our libraries, synagogues and fire houses. Swift action must be taken to prevent these new towers from being erected.

There are three locations where T-Mobile is proposing to install different types of wireless telecommunication equipment:

1. North Merrick Library

North Merrick Library Director Tom Witt advised the North Merrick Community Association (“NMCA”) of T-Mobile’s proposal to erect a 50’ flagpole cell tower to replace the old rusted flagpole that stands in front of the North Merrick Library. He invited T-Mobile representatives to the NMCA’s June 21 meeting to discuss their proposal. Several people expressed their outrage at the thought of a cell tower at a library. I questioned whether T-Mobile would consider installing the tower only a short distance away on the Meadowbrook Parkway. T-Mobile rep Tom Erwin said that it was an arduous process to deal with the state’s regulations. I called and wrote Senator Fuschillo and Assemblyman McKeivt requesting that they investigate these applications and see if state property along the highways might be better locations for cell towers than near our homes, schools and libraries.

Senator Fuschillo opposes this cell tower and is requesting Crown Communication (the company contracted to manage wireless telecommunication equipment along the state highways) to provide us with its procedure for approving cell tower installations. **With Senator Fuschillo’s help, I am hopeful that not only will we be able to find a better location for the North Merrick Library site, but for the Farmingdale-Wantagh Jewish Center site as well.**

If we install cell towers along the highways, it is my hope that these larger poles will

cover larger areas and we will be able to take down the cell antennas that are on nearby utility poles and place them on these poles.

If you are interested in reading my opinion piece on this cell tower, please go to [HYPERLINK "http://merrick.patch.com/articles/borecky-who-wants-to-pledge-allegiance-to-a-cell-tower"](http://merrick.patch.com/articles/borecky-who-wants-to-pledge-allegiance-to-a-cell-tower)<http://merrick.patch.com/articles/borecky-who-wants-to-pledge-allegiance-to-a-cell-tower>.

2. North Bellmore Fire Department at Newbridge Road and Columbus Avenue

A hearing is scheduled by T-Mobile at the Town Board of Zoning Appeals (BZA) for Wednesday, July 14 to hear T-Mobile's request to install six wireless communication antennas concealed inside a proposed 100-foot high monopole and equipment cabinets on the ground at 847 Newbridge Road, on land owned by the North Bellmore Fire Department, Engine Company #2 location, at Columbus Avenue, across from East Meadow Avenue.

On June 30, 2010 the North Bellmore Fire Dept. held a meeting to give the residents a chance to voice their concerns regarding this cell tower. Angry residents demanded that they find a better location. T-Mobile representatives did not show. Senior Deputy Town Attorney Charles Kovit said that their consultant will look over to see if T-Mobile did everything it could to find a better location for this tower.

I met with Leg. Denenberg and some North Bellmore residents who are opposing this tower and discussed uniting to fight the three T-Mobile cell tower locations. There are strength in numbers and with the help of Leg. Denenberg, we will organize a united front to fight these T-Mobile applications.

Leg. Denenberg is requesting an adjournment of that hearing and will send a representative to the BZA to make sure that it is adjourned.

3. Farmingdale-Wantagh Jewish Center

On the same date as the hearing for the North Bellmore Fire Department cell tower site, the BZA is also scheduled to hear T-Mobile's request to install six antennae on the outside of the Farmingdale-Wantagh Jewish Center's chimney, **3710 Woodbine Avenue, Wantagh, NY** which stands at approximately 35' tall.

T-Mobile representatives held a meeting at the Wantagh Knights of Columbus on Wednesday, July 8, 2010. Pam Naughton, Jeanine Boiko and Lori Stehl spread the word throughout the neighborhood. Approximately 150 angry Wantagh residents attended that meeting to protest these proposed cell antennae. This drew TV media attention with News 10/55 and News 12 interviewing Wantagh residents, Leg. Denenberg and me at the Knights of Columbus meeting and at a prior meeting the week before at a resident's home where 50 people attended.

The Wantagh residents also feel that we need to unite. **The Telecommunication Taskforce is working with Leg. Denenberg, the Wantagh, North Bellmore and North Merrick residents and the MOMS of Merrick and Bellmore to fight these proposed cell towers.**

Town of Hempstead

One of the main objectives of the Telecommunication Taskforce ("Taskforce") is to prevent the inundation of wireless telecommunication equipment in the Town of Hempstead ("Town"). At the Taskforce's first meeting in early March 2010, it was decided that we would again sit down with the Town and work with them in establishing code that would prevent the future proliferation of cell antennae. After several

conversations that both Joe Baker, President of the South Merrick Community Civic Association (“SMCCA”), and I had with Attorney Kovit, we were advised that the town is retaining a consultant to write its code. On behalf of the Taskforce, I submitted provisions that we would like to see adopted in the new ordinance.

At about the same time, Jodi Turk and Sharon Curry formed MOMS (“Moms of Merrick”) to fight the cell antennae near the Merrick schools. They then retained Attorney Andrew Campanelli, an attorney who had instituted a suit in Bayville against cell antennae that were installed on top of a water tower near a school. Attorney Campanelli has also opened conversation with the Town and will have input into the Town’s wireless telecommunication code.

Legislator Denenberg suggests we urge the Town to establish a moratorium of the approval of permits for the installation of cell towers and antenna. This is an urgent matter that demands our immediate attention. We must prevent these new applications for cell towers from being approved.

New York State

Attorney Campanelli is looking into NextG’s status as a public utility and is working toward getting the cell antenna off the utility poles in front of people’s homes and schools.

The Taskforce is working with Senator Fuschillo to seek alternate sites for the cell towers and antennae. Another Taskforce objective is to work with the state legislature in revising legislation that restricts local control of wireless telecommunication installations and examining the criteria for public utility designation. We FOILED for documentation that will help us fight the cell phone companies.

U.S. Government

The Telecommunication Act of 1996 prohibits the denial of wireless telecommunication equipment due to health risks associated from radio frequency emissions if it falls within federal standards. This act clearly protects cell phone companies from being sued for claims of illnesses or deaths. However, it does not say that you cannot deny applications based on other reasons, such as reduction of property values.

In any event, as new studies have been conducted with data the Taskforce will ask our U.S. Congressmen and Senators to revisit the Act to protect its citizens, instead of its cell phone companies. I’ve mentioned this to both Senator Schumer and Congresswoman McCarthy and hope to work with our representatives, asking them to introduce legislation to revise the Act.

I am deeply moved by the compassion and understanding that the people of our communities are showing toward their neighbors who have these cell antennas right outside their children’s bedroom windows, just feet away from their children’s schools and dangerously lurking outside homes of people who have health concerns. Whether it is a line or two, a signature on a petition online or on paper, or actively volunteering their time and energies in pursuing this fight, it is truly commendable that a community is coming out in support of its neighbors and a testament to what can be accomplished when a community stands united.

"Never doubt that a small group of thoughtful, committed, citizens can change the world.

Indeed, it is the only thing that ever has." — [HYPERLINK](#)

["http://www.goodreads.com/author/show/61107.Margaret_Mead"](http://www.goodreads.com/author/show/61107.Margaret_Mead)[Margaret Mead](#)

To learn more about the history of cell antennas in Merrick, to examine pertinent

documentation, or if you are interested in learning more about the Taskforce, please visit [HYPERLINK](#) "<http://www.northmerrickcivic.com/>" www.northmerrickcivic.com or call Claudia Borecky at 516-972-6988.

Please also visit the MOMs site at [HYPERLINK](#) "<http://www.dontcellout.com/>" www.dontcellout.com to get the scoop on what communities are doing to fight this intrusion of wireless telecommunication equipment.

Claudia Borecky Telecommunication Taskforce 972-6988

from Talal (filmmaker)

It's been a while since we updated you with the news of Full Signal, and that certainly hasn't been for lack of activity.

The Wireless industry has been in a flurry ever since the Interphone Study (which they sponsored 50% of) cast even more doubt into the safety of wireless technologies.

They were even more shocked when San Francisco passed legislation to make Standard Absorption Rate information more prominent for people buying cellphones.

Since we last wrote, Full Signal was shown to Congressional Staff in Washington, DC, it was a finalist at the Anasy Documentary Awards in Abu Dhabi, and we have had several community screenings.

We have kept up our media campaign in outlets such as the Huffington Post, etc.

The awareness campaign continues!

For us, Full Signal has turned over a new leaf. One that many of you have been waiting for: the release of Full Signal on DVD!

What makes things even more exciting is that since making the DVD announcement a couple of weeks ago on our [HYPERLINK](#) "http://www.facebook.com/pages/Full-Signal/172006015778?v=app_4949752878&ref=search" Facebook Page, we have literally sold hundreds of DVDs, and are already manufacturing more!

You can buy the Director's Cut DVD by going to FullSignalMovie.com and clicking the [HYPERLINK](#) "<http://dvd.fullsignalmovie.com/catalog>" DVD Tab or by linking through this e-mail.

Once there you will find 5 different products:

Americas DVD. This DVD is NTSC format and although it is meant to be played on the American continents, we have not limited its region playability. This DVD comes with 3 languages built into it: English, French and Spanish (including full English subtitles for the hearing impaired).

Worldwide DVD: This DVD is meant to be played everywhere else in the world. This is a PAL DVD and is not restricted to any one region. In addition to the languages above, we have added Arabic, German, Italian, and Swedish to this version [thanks in no small part to the diligence and hard work of some very dedicated volunteers!]

While the Americas DVD is already being shipped, we are currently taking advanced orders for the Worldwide DVD (which will begin shipping next month).

There are some great volume discounts (so if you and your friends want copies buy them

together). There are also one-off offers that we will post on our Facebook Page under the DVD Tab.

The 3rd option under the "Home DVD" section is the Awareness DVD. This is exactly the same DVD you would buy to watch at home, but is intended to be used to raise the awareness of politicians, the media, etc. We're offering it at a 40% discount off the price of the regular DVD, because after all this why we made the film (the one condition is that we mail it directly to the politician/media outlet in question).

We have also facilitated the screening option by including 2 different screening fees depending on the size of the audience. We just had a successful test of this system last Friday with a screening in Calgary (Canada) attended by about 75 people.

So at this point, I want to thank all the volunteers for the countless hours they put in to making this DVD possible. And I also want to thank all those who have purchased copies of the DVD so far.

For those of you on Facebook who have seen the DVD, please be so kind as to write a review by clicking on the review tab.

Our very best to all of you!

Talal Jabari

Talal Jabari

Director

Full Signal (2009)

"AUDIENCE AWARD" 4th Gasparilla International Film Festival, Tampa, FL

"AWARD of MERIT" Accolade Competition 2010

"BEST DOCUMENTARY" 5th Myrtle Beach International Film Festival

"FINALIST" 2nd Anasy Documentary Awards, Abu Dhabi, United Arab Emirates

"OFFICIAL SELECTION" 15th Vilnius International Film Festival, Vilnius, Lithuania

"OFFICIAL SELECTION" 7th Big Sky Documentary Film Festival, Missoula MT

"OFFICIAL SELECTION" 18th Environmental Film Festival, Washington DC

"OFFICIAL SELECTION" 10th Santa Fe Film Festival

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Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

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Publish Date: 3/2/2011 12:00:00 AM

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Please do not remove landlines. They are a lifeline for the EMF & RF sensitive and as they already exist there is no added cost. Wireless will be shown as having a heavy health and environment cost. Plus fiber optic should be underground and until society is willing to take time and use funds to do that we do not need more wireless.

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City: Chilliwack

Country: Canada

State or Province: British Columbia

Postal Code: V2R5W1

Organization Name: null

I want to know why you would consider getting rid of our land line phones? They are safe, they work better than portables, no batteries to replace, better reception, they don't give off radiation. I like my land line phone....I know where it is...I don't have to hunt around when the kids don't put the portable back on the hook.

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Susan

Last Name: Wolf

Mailing Address: 70 Park St. #25

City: Brookline

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State or Province: MA

Postal Code: 02446

Organization Name: Concerned Individual

It is important that we keep and maintain our landline infrastructure. This infrastructure already exists, has proven robust, reliable, affordable and no questions of negative health effects exist with regard to landlines.

Landlines are more secure and not subject to the operations of drive by hackers as are wireless technologies. Also, I personally find my landline phone to be much more reliable and to deliver higher call quality than my cell phone. Internet calls are terrible by comparison and not available in an area where I recently spent an extended stay.

The safety of certain wireless technologies has not been proven and the problems of interference with the increasingly more common electronic medical implants are a cause for serious concern. Additionally, our regulatory bodies do not have a sufficient grasp of the technical issues involved with the growing wireless infrastructure. In some cases the science does not exist to guide the crafting of effective and safe policy and leaves the door open for business to attempt to operate via self regulation. This is not a wise path.

Again, please take the steps to keep out wired land line infrastructure operational and available to customers like myself.

Sincerely,
Susan Wolf
Brookline, MA

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

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Postal Code: 87508

Organization Name: null

I am writing to ask you to please keep in mind that some people are unable to use cell phones and cordless telephones in their homes. I am one of these people. There is too much electromagnetic energy that comes off of a cordless phone and cell phones, both of these would affect my health if I used them in my home. I keep a cell phone in my car, turned off, only for emergency use. I use a long 25 ft cord to maneuver around my house while on my land line telephone. As much of an annoyance as this long cord is, I am grateful to have this option in my home, and to not suffer ill effects from excess electromagnetic radiation in my house. Electromagnetic radiation sensitivity is a reality, thousands of people are sensitive and suffer from this. Symptoms can include dizziness, headaches, nervous system problems, nausea, blurry vision, just to name a few. I hope that you will consider the many people in my situation and not do away with land lines.

Thank you for your consideration,

Sharon Dozar

Submitter Info.txt

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Public Comments on Developing an Unified Intercarrier Compensation: =====

Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Lisa

Last Name: Kim

Mailing Address: 1128 Bayhill Avenue

City: Naperville

Country: United States

State or Province: IL

Postal Code: 60565

Organization Name: none

If I read the proposal correctly, then you are considering eliminating the landline phone service. I am very much against the elimination of land line phone service.

1) It is the easiest to trace for emergency calls, if the person cannot give the location.

2) If a person forgets to recharge the phone, it cannot be used for awhile for personal or emergency purposes (and the latter scares me quite a bit)

3) If the phone or charger is misplaced, then you have to go to the store immediately to resume phone access. If the stores are closed, tough luck. If like my mom you need someone to drive you, again tough luck.

4) Sometimes kids will take and misplace your cell phone (even when taught not to)

5) Sometimes the elderly, like my grandmother, either misplaces her phone, forgets to recharge, or just forgets to turn it on.

6) health reasons - I choose to have landline service also because I don't want to be exposed to the radiation emitted from the cell phones. I have a cell phone, but I use it very sparingly because of this possible health hazard.

So PLEASE do not eliminate the landline phones or make it difficult for the businesses to make a profit offering it or people from affording it, if that is what they choose.

Submitter Info.txt

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: grace

Last Name: bonaparte

Mailing Address: 2631 fowler park

City: the woodlands

Country: United States

State or Province: TX

Postal Code: 77385

Organization Name: null

This is sick!!!! Taxpaying citizens want to have rights!!! I want my landline and use it far more than a radiation emitting cell phone!

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Susan

Last Name: Lippman

Mailing Address: 8901 Chisholm Ln

City: Austin

Country: United States

State or Province: TX

Postal Code: 78748

Organization Name: null

I understand that the FCC proposes to eliminate many landline telephones.

Landlines provide many qualities that wireless communication cannot match. There are many excellent reasons that landline telephones should remain part of the mix.

Wireless communication has not been proven to be safe. While there are claims that it is not proven to be harmful, the actual long-term experiment is running now, on all of us. It is often advised that children, in particular, avoid regular cell phone use.

There is research showing that radiofrequency radiation weakens the blood-brain barrier, alters blood glucose levels (which is critical in the brain), and is associated with a rise in cancer rates.

I personally use my landline whenever I am home, and use earbuds to keep my cell phone farther away from my body when I am away from home. I have friends who are electromagnetically sensitive who have taken refuge by living in a remote small town. People with medical implants must use landlines.

Landlines offer reliability that wireless communication does not. Some systems, like teleconferencing, are not reliable over wireless communication systems. In natural disasters, landlines are often the only system working.

Landlines offer greater security and privacy, and thus help us avoid identity theft and other forms of fraud. Existing regulations help keep landlines affordable. And for the elderly or handicapped, landlines are often the only system that is easy enough for them to use. The infrastructure already exists, and it should be retained for the clear benefits that it offers.

Thank you for your attention.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Kate

Last Name: Uleman

Mailing Address: 610 Fountain St

City: Ann Arbor

Country: United States

State or Province: MI

Postal Code: 48103

Organization Name: null

I am writing to protest the passage of the FCC's proposal to do away with landlines, and have the nation rely only on cell phones and VoIP means to communicate.

I am concerned about negative consequences to human health from cell phone useage, and other wireless devices, and believe it would be dangerous to eliminate the choice of landlines at this point, when cell phones and other wireless devices have questionable health consequences.

I urge law makers to block the passage of this proposal.

Thank you.

Kate Uleman

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Martha

Last Name: Carrington

Mailing Address: 1555 Merrill Street, Space 135

City: Santa Cruz

Country: United States

State or Province: CA

Postal Code: 95062

Organization Name: null

The switched telephone network must be maintained.

The Architectural and Transportation

Barriers Compliance Board ("the Access Board"), is the federal agency that administers the Americans with Disabilities Act. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities

(<http://www.access-board.gov/research/ieq/intro.cfm>). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

Do not eliminate landline services.

Submitter Info.txt

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FR Document Number: 2011-04399

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Kathleen

Last Name: Hall

Mailing Address: 308 E. Kirkwood Ave

City: Fairfield

Country: United Kingdom

State or Province: IA

Postal Code: 52556

Organization Name: null

I am very strongly opposed to eliminating land phone lines. I feel the radiation every time I use a cell phone. Americans should not be required to use them. As research comes in, it is showing the dangers of brain tumors related to cell phones, especially among children whose skull bones are not yet strong and hard.

Under no circumstance should Americans be forced into using only cell phones.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Ari

Last Name: Fitzgerald

Mailing Address: 4702 Clear Ave.

City: Tampa

Country: United States

State or Province: FL

Postal Code: 33629

Organization Name: null

I oppose the elimination of "landline" technology. Despite its age, it remains functional even when there are power outages, which makes it superior to other technologies. Moreover, it is more secure than broadband and wireless.

I have nothing against broadband--I even use it--but we had ongoing problems with it for over a year, it was constantly going out. When it did go out, I was forced to use a wireless phone, which I detest. Wireless has not been vetted for safety.

Not only should the FCC not promote technologies that may be injurious to public health, but it shouldn't unilaterally eliminate the choice of landline technology as a mode of secure communication.

Please reject the proposed rule.

Thank you.

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Judy

Last Name: Rust-Huerta

Mailing Address: 1100 Soaring Eagle Ct.

City: Chromo

Country: United States

State or Province: CO

Postal Code: 81128

Organization Name: null

I and my family are asking that the switched telephone network be maintained lest millions of individuals be left without even basic telephone service. Eventual loss of the network will also eliminate DSL service which is critical in the remote area in which we live, where cell phones often do not work.

Although the burgeoning field of telecommunications is lucrative, and halting the spread of that technology will be years away (when the health hazards are broadly recognized), but there is certainly enough confirmed research already to proceed with caution. The preponderance of that research is coming from Europe, while here in America the race to fortune tends to predominate. One of the best sources to date that I'm aware of is the 610-page Bio Initiative Report (August 31, 2007).

We ask that the FCC evaluate the research to date, which is accumulating rapidly and impressively. We and many others ask that you do not rush this unquestioned telecommunications trend by eliminating communication alternatives to EMR.

Sincerely,

Judy Rust-Huerta LISW

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Dagmar

Last Name: Ehling

Mailing Address: 2713 Winton Rd.

City: Durham

Country: United States

State or Province: NC

Postal Code: 27707

Organization Name: null

I would like to comment on the proposed legislation to eliminate landlines. As a health care practitioner I am deeply concerned about the lack of scientific evidence in regards to wireless technology. We personally do not have wireless technology in our house for that reason and I use my cell phone only if I absolutely have to. I treat many patients who have sensitivities to wireless technology. I have concerns about wireless phones affecting the blood brain barrier. Some scientists have expressed concerns that cell phones held near the head may contribute to brain cancer.

In addition, friends and colleagues who have VoIP complain of dropped calls, bad sound quality.

Landlines are safe, the infrastructure is in place, and they work in a situation of a power outage (which in NC happens all too often). In addition, they do not need to be recharged or maintained which increases cost.

Please do not limit our ability to choose!

Thank you! Dagmar Ehling, DOM, LAc.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Julia

Last Name: DeVlieg

Mailing Address: PO Box 5

City: Rice

Country: United States

State or Province: WA

Postal Code: 99167

Organization Name: null

I ask that the switched telephone network continue to be maintained. People in rural areas, those who are electromagnetically sensitive, and my use of DSL service all depend on it.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Louise

Last Name: Stanphill

Mailing Address: 3727 Hennessy Place

City: Santa Rosa

Country: United States

State or Province: CA

Postal Code: 95403

Organization Name: self

I used to be a healthy person, until a year and a half ago, I believe cell phone use caused me to become electrosensitive. Now I can't be around anything wireless without feeling physical pain. I absolutely cannot use a cell phone, and cannot be around anyone using a cell phone. I can only use a computer for a few minutes at a time, and find making my needs known almost impossible on line or over the phone.

The only way I can communicate is on a land line, on speaker phone, and talking from a distance, and only for a short time.

Eliminating landlines will leave me and millions of Americans without even basic telephone service. This cannot be allowed under the Americans with Disabilities Act. The switched telephone network must be maintained for the disabled and the elderly. I deserve and need the same communication capabilities as others. I must have a land line phone to communicate. There is no other way for me.
Louise Stanphill

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Dealy-Doe-Eyes

Last Name: Maddux

Mailing Address: 516 Shulenberg Road

City: St. Johnsville

Country: United States

State or Province: NY

Postal Code: 13452

Organization Name: null

The switched telephone network must be maintained. The Architectural and Transportation Barriers Compliance Board is the federal agency that administers the Americans with Disabilities Act. According to them 3% of Americans (about 10 million people) have electromagnetic sensitivities and cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is NOT universal if 10 million Americans cannot use cell phones.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Emma

Last Name: Czarapata

Mailing Address: 3106 Larsen Rd

City: Madison

Country: United States

State or Province: WI

Postal Code: 53711

Organization Name: null

Dear Sir or Madame,

I am writing in support of continued use of land lines. I do not want to give up my phone.

We use only a land line at our house. I want to have it in case of storm and power outage. Research has shown also that cell phones are safe and can cause harm to the human body over time.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Karen

Last Name: Eberly

Mailing Address: 417 NE 4th Avenue

City: Gainesville

Country: United States

State or Province: FL

Postal Code: 32601

Organization Name: null

I am speaking for everyone in my household, who all want to keep our landline telephone. I am sensitive to cell phone radiation and much prefer to use a landline. I have to limit my exposure to computers and other electronics due to this sensitivity; please don't make me sicker! I understand there are perhaps 10 million Americans who are similarly affected by electromagnetic radiation, so please don't eliminate our safe phone network. Thank you.

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Paraskeve

Last Name: Hantzopoulos

Mailing Address: 32-39 33rd Street

City: Astoria

Country: United States

State or Province: NY

Postal Code: 11106

Organization Name: null

I am opposed to eliminating landlines for many reasons. Landlines provide fewer dropped calls, static, teleconferencing issues. During a blackout in NYC, no cellphones worked, yet landlines did, providing a life line to many people. Cell phone radiation is of great concern, as is the radiation emitted from cell phone antennas and towers. Children, especially, are most vulnerable, absorbing radiation at greater rates than adults. Therefore, it is irresponsible to eliminate landlines, which provide safer modes of communication especially since the infrastructure already is in place. Consumers demand the option of landlines.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Ryan

Last Name: Rose

Mailing Address: P. O. Box 584

City: San Luis

Country: United States

State or Province: CO

Postal Code: 81152

Organization Name: Rose Consulting

My wife, son, and I are all electromagnetically sensitive and have eliminated, to the extent practical and possible, wi-fi and cell phone fields in our rural home, including portable telephones. We simply cannot maintain our health in those fields, especially wi-fi. The 3% of the population estimated by the Access Board as electromagnetically sensitive is an early figure, which will grow as people's bodies reach threshold and can no longer adjust to these fields. I am a retired health professional (NMD) and former aerospace engineer with NASA, and am predicting a steady rise in persons with a full range of health problems resulting from this escalating exposure to pervasive environmental electromagnetic radiation. I and my family are asking that the switched telephone network be maintained lest millions of individuals be left without even basic telephone service. Eventual loss of the network will also eliminate DSL service, which I especially depend on in my consulting business.

We realize that there is money being made in the burgeoning field of telecommunications, and that halting the spread of that technology will be years away (when the health hazards are broadly recognized), but there is certainly enough confirmed research already to proceed with caution. The preponderance of that research is coming from Europe, while here in America the race to fortune tends to predominate. One of the best sources to date that I'm aware of is the 610-page Bioinitiative Report (August 31, 2007).

There is no excuse why the FCC cannot simply evaluate the research to date, which is accumulating rapidly and impressively. We and many others ask that you do not rush this unquestioned telecommunications trend by eliminating communication alternatives to EMR. Technology has both a positive and a dark side, and should not be embraced blindly.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Diana

Last Name: Ostermann

Mailing Address: 7364 North Shore Dr.

City: South Haven

Country: United States

State or Province: MI

Postal Code: 49090

Organization Name: null

Please do not replace existing landlines with wireless infrastructure until it is proven safe, secure, reliable and affordable! Landlines are safe. Children, people with medical implants, people with Radiofrequency Sickness (I am electrosensitive), and people who don't want to increase their risk of cancer can use only landlines. Research on radiofrequency radiation exposure indicates increased cancer incidence, altered blood glucose levels, weakened blood-brain barrier. Many in the public cannot use any cordless or wireless phone without developing headaches that are often severe.

Landlines are secure and ensure privacy. Using mobile phones makes us vulnerable to hackers and terrorists. During power outages and natural disasters, landlines are dependable.

Landlines are affordable, with the infrastructure already in place. The equipment is durable and economical. Mobile phone fees, however, are unregulated. Mobile phones and computers need constant repair, upgrades and replacement. Seniors and low-income citizens can't afford this.

Landlines are Green. As a nation, we must reduce our use of power and greenhouse gas emissions. Corded landlines require minimal electricity compared with antennas that emit radiation continuously. Cellphones require recharging. People often trade up to a new cellphone when their one or two year contract expires. This is not the time to buy new devices or install new infrastructure that demands more electricity production.

Please do not promote the interests of telecom corporations over citizens' health and safety.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Barbara

Last Name: greenblatt

Mailing Address: 8605 Hempstead

City: Knoxville

Country: United States

State or Province: Tennessee

Postal Code: 37923

Organization Name: null

The government should only be governing- not meddling into business!! There are over 10 million people in the United States that depend on landlines for phone service that will be adversely affected if the government is allowed to do this!

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Tonya

Last Name: Peterson

Mailing Address: 1093 sw 90th rd

City: Oronogo

Country: United States

State or Province: MO

Postal Code: 64855

Organization Name: null

I have family who can not use cell phones because of health issues. I would like to be able to get in contact with them when needed so please do not take away land lines

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Roberta

Last Name: Anthes

Mailing Address: 2 Snowden Lane

City: Fairfax

Country: United States

State or Province: CA

Postal Code: 94930

Organization Name: null

I am writing to request that the FCC abandon its campaign to eliminate land lines. This measure will exclude approximately 10 million people who have electromagnetic sensitivity, as well as many elderly who do not wish to use cell phones. People want options; do not make this program mandatory.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Lisa

Last Name: Hoag

Mailing Address: 106 Lockes Village Rd.

City: Wendell

Country: United States

State or Province: MA

Postal Code: 01379

Organization Name: null

If you eliminate landlines, you are foolish beyond belief. Enough! Stop dismantling our country back to the very stone age!!! To establish the network of landlines took a heroic effort. There are serious health risks involved with cell phones, and they are not reliable everywhere. I live in a very rural area, where cell phones do not get reception.

I am thoroughly disgusted with the endless domestic warfare that is being waged on our rights and freedoms, and our sustainability as a society.. Please wake up and stop treating our country like it is nothing but a cash cow for corporations, Please recall yourselves to some semblance of civilized human decency and stop acting like animals.

In short, when I learned of this through my email, and the ridiculously short comment period on something of such great consequence, it quite took my breath away!!!!

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Alexandra

Last Name: Ansell

Mailing Address: 728 John Adams Lane

City: W. Melbourne

Country: United States

State or Province: FL

Postal Code: 32904

Organization Name: null

I depend on land lines for telephone use (including my work which is from home). I am electromagnetically sensitive. I cannot adequately express my opposition to the elimination of land lines. The proliferation of wireless technologies is already violating the Americans with Disabilities Act and making buildings inaccessible to people with implanted medical devices and the electromagnetically sensitive. The FCC guidelines for exposure to radio frequencies are totally inadequate and were designed for limited exposure and protection from burns for a 200 lb man, not for continuous exposure to fetuses, children, women and animals (both inside the home and out-with the inclusion of smart meters and wireless data collection antennae throughout entire neighborhoods). RF is a suspected carcinogen and under study by the WHO and others - the results of studies have not yet been published. DO NOT ELIMINATE LAND LINES!!!!!!

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Steve

Last Name: Savitz

Mailing Address: 111 East 2nd Street #4A

City: New York

Country: United States

State or Province: NY

Postal Code: 10009

Organization Name: null

Many international studies show cell phones can cause cellular disturbances in the human body. it's the biggest mass experiment in human history. No one knows the long term effects. Many suspect brain tumors. Even if only 40% of those studies are correct, isn't that enough?? Land lines are integral to many people in society. It's important that they remain a communication option.

Steve

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Jane

Last Name: Levy

Mailing Address: 461 5th avenue

City: new York

Country: Namibia

State or Province: NY

Postal Code: 10017

Organization Name: null

Notwithstanding Congressional hearings in '08+'09 re: cell phone dangers, last month's NIH report that explained that brain scans showed that 50 minutes on a cell phone drastically changed brain metabolism in the area of the brain linked with judgment and repression of rage, the cell phone industry's own findings in 1994 of double strand DNA breaks, acoustic neuroma increases and cell micronucleation,

So WHY does the FCC propose to DO AWAY WITH LANDLINES and make society cell phone and VoIP (voice over internet computer calls) only. Besides taking away a tried, tested and safe way to communicate and send data, as you know, such a proposal would mean MORE CELL TOWERS and fewer means to protest their placement.

Please be aware that we are only increasing the amount of radiation to which we are exposed without any additional benefit on the way we are currently doing things

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Sherry

Last Name: Dingler

Mailing Address: 6924 Loretta Pl.

City: Charlotte

Country: United States

State or Province: NC

Postal Code: 28215

Organization Name: null

The new wireless technology causes me pain and grief every day of my life. I have extreme sensitivities to electromagnetic fields. The first thing I had to do was to unplug my cordless telephone. I can only use a landline at home. The more cell towers they put up and the more wireless technology that is used causes me more and more pain and agony. It causes everything from pain to tremors to seizures to confusion and many cognitive problems. What about our rights? What about our having a life worth living? We must maintain the switched telephone network and NOT replace them with broadband service. Please hear our cry. This needless suffering must stop.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Jane

Last Name: Barnett

Mailing Address: 3671 Dayton Ave N #2

City: Seattle

Country: United States

State or Province: WA

Postal Code: 98103

Organization Name: null

It is absolutely ridiculous to be discussing termination of land lines and easy affordable land line access for all. There are many people who cannot use cell phones comfortably due to EMF hypersensitivity, a recognized disability in Sweden, and a growing problem in the USA. That aside, the WHOLE population is at risk with cell phone use. WHAT HAPPENED TO THE CAUTIONARY? Until they are PROVEN safe, they should not be made our only form of phone communication.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Janis

Last Name: Bell

Mailing Address: 20090 New Gambier Rd.

City: Gambier

Country: United States

State or Province: OH

Postal Code: 3022

Organization Name: null

Please don't do anything to limit land line phones. For those of us with sensitivity, cell phones are problematic (for example, I get pain inside my ear when I talk on a cell phone, but not on a corded land line). Also, living out in the country, cell phones drop calls often, or get bad reception, making it very difficult to use for any kind of business call.

Submitter Info.txt

Please Do Not Reply To This Email.

Public Comments on Developing an Unified Intercarrier Compensation: =====

Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Alexandra

Last Name: Thode

Mailing Address: 260 N maint street

City: Imlay city

Country: United States

State or Province: MI

Postal Code: 48444

Organization Name: null

Dear life-decider

I am an electrosensitive teenager in Eastern Michigan

if you ban landlines, I would never be able to use a phone.

I would not be able to call 911 if I needed to

call cops if I needed them the fire department, OR anything else like my family.

I am Electrosensitive, Using a wireless phone like a cellphone or DECT phone are

extremely harmful to me, I use a corded landline phone, and it's wonderful. I can't

imagine living without it. Ban these and you destroy my future - You really don't

think about how important a phone is until someone's threatening to take it away-

You use it for jobs, for family, to get help, order things, talk to friends, apply

for jobs or arrange travel. If you ban them You're destroying my future.

and I'm not even an adult yet- for what? Some companies profit?

There are 10,000,000 more people exactly like me. They can only use a landline.

They can't use A cellphone.

Take away the landline and you're committing to genocide, out of negligence- Once

again, For what- Profit from A cellphone company?

Last time I checked, Lives were more valuable than money.

But I know that's not always how it works.

Please show this to the other people who are reading all of these letters. They need

to understand it's genocide. People who are ES are already outcasts. Going to places

with Wi-Fi or Cellphones makes them sick. Do this, you'd be forcing them to buy a

technology that physically hurts them. Like- Someone contaminates all the clean

water, and then everyone can only buy nasty sewage water. Get the picture?

Thank you for doing something beneficial to us 10 million ES people :) We appreciate your time and effort.

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Madeline

Last Name: Rivera

Mailing Address: 600 W. orange Grove

City: Tucson

Country: United States

State or Province: AZ

Postal Code: 85704

Organization Name: null

Please do not replace existing landlines with wireless infrastructure until it is proven safe, secure, reliable and affordable!

Landlines are safe.

Many people like myself cannot use any cordless or wireless phone without developing headaches that are often severe. Children, people with medical implants, people with Radiofrequency Sickness, and people who don't want to increase their risk of cancer can use only landlines. Research on radiofrequency radiation exposure indicates increased cancer incidence, altered blood glucose levels, weakened blood-brain barrier.

Landlines are secure. Cabled phones ensure privacy.

Using mobile phones makes us vulnerable to hackers who commit financial fraud. It makes us vulnerable to terrorists.

Landlines are reliable.

During power outages and natural disasters, landlines are dependable.

Teleconferencing can be unreliable with broadband connections. VoIP calls are also often dropped midstream.

Landlines are affordable.

We already have the infrastructure for landlines. Mobile phones fees are unregulated.

Mobile phones and computers need constant repair, upgrades and replacement. Seniors and low-income citizens can't afford this. Equipment for landlines is durable and economical.

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Beth

Last Name: Baron

Mailing Address: 6910 Gladys Ave

City: El Cerrito

Country: United States

State or Province: CA

Postal Code: 94530

Organization Name: null

Dear People,

My understanding is that this rule will phase out land lines completely. This should be illegal under the ADA or similar laws for people with disabilities. Those with sensitivities to EMFs and cell phone radiation do not have the option to use cell phones without severe cost to health and quality of life. People need to have the land line option. In addition, as I understand it, research has implicated cell phone use as a cancer risk. Using headsets reduces the risk, but does not eliminate it. All people should have the option to minimize this risk to themselves by using land lines.

Thank you for your attention and consideration.

Beth

Beth A. Baron

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Julie

Last Name: Kieborz

Mailing Address: 6722 N 10th Ave

City: Phoenix

Country: United States

State or Province: AZ

Postal Code: 85013

Organization Name: null

Please consider all of the new research that has been coming out pertaining to risks associated with cell phone use. It is too early, given the short amount of time of high cell phone usage, to take such a drastic step and reduce our nation's landlines.

Please consider security issues as well as health issues.

Thank you.

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Kara

Last Name: Uleman

Mailing Address: 40 Schuyler Road

City: Nyack

Country: United States

State or Province: NY

Postal Code: 10960

Organization Name: null

I am writing to object to the FCC's proposed ruling to do away with land line phones and replace them with cell phones. Wireless technology presents biological hazards that are just beginning to become understood and recognized, per the following cases in point:

the European REFLEX studies in 2000 found deleterious biological effects from cell phone radiation

*the German company T-Mobile did a survey of existing literature finding negative consequences to cell phone use

*the Austrian reinsurance industry refused to reinsure wireless companies after finding decreased test performance by adults who used a cell phone for a couple of hours and irregularities in test tube samples of blood exposed to cell phone radiation

*Appendix 2 of the WHO INTERPHONE Report released in April, 2010 links 10 years of cell phone to a doubling of gliomas

*the UK and Israeli governments have informed the public not to abandon their landlines; Israel recommends corded landlines and not portable phones (which emit microwave radiation).

*major scientists including David Carpenter of the Presidential Cancer Panel, Devra Davis, founder for the Center for Environmental Oncology, Lloyd Morgan of the Central Brain Tumor Registry say that we are at the beginnings of a major brain tumor and cancer epidemic from cell phones

* studies link cell phone use to gliomas, meningiomas, acoustic neuromas, parotid gland tumors, tinnitus, sperm count drops, testicular cancer, decreased performance on tests, cognitive processing problems including but not limited to ADHD.

*the WHO acknowledges that 3% of the world population suffers from electrohypersensitivity and cannot tolerate proximity to cell phones, cell towers, wi-fi and other forms of electromagnetic pollution

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Peggy

Last Name: Sanders

Mailing Address: peggster58@hotmail.com

City: Lakemont

Country: United States

State or Province: GA

Postal Code: 30552

Organization Name: null

I have a landline telephone and do not want to lose the ability to continue to have one. I do not use a cell phone due to my concerns over the electromagnetic frequency. Therefore, to take away my ability to have a phone/communication would be both a MAJOR interruption in my life as well as a danger to my health should I require a phone for emergency purposes. I ask you to consider the millions of people who choose not to use a cell phone for everyday communication who are in need of landline phones. PLEASE DO NOT ALLOW THIS TO PASS.....AMERICA IS THE COUNTRY OF FREEDOM OF CHOICE.

Thank you.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: J.

Last Name: Jones

Mailing Address: 45 Whitt Road

City: Leicester

Country: United States

State or Province: NC

Postal Code: 28748

Organization Name: null

A friend just let me know that the FCC is proposing to take the first specific steps toward the elimination of landline telephones. I am asking that you reconsider. Like millions of other people worldwide, I am electromagnetically sensitive and cannot use cell phones. These days, I can use computers only a short period of time each day, having worked in front of one for years which may have been the precipitating factor in my sensitivity. In short, I would not relish the thought of having no form of long distance communication left to me. I also wonder what my options would be in case of emergency.

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Loe

Last Name: Griffith

Mailing Address: 8227 Mellows Lane

City: Portal

Country: United States

State or Province: AZ

Postal Code: 85632

Organization Name: null

It is crucial to maintain the switched telephone network.

I am disabled and my brain injury causes me to have severe pain when using a cell phone.

Millions will be without basic telephone service if landlines are eliminated.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Tron

Last Name: Peterson

Mailing Address: 9949 County Ln 212

City: Webb City

Country: United States

State or Province: MO

Postal Code: 64870

Organization Name: null

I am writing in regards to AT&T wanting to get rid of all land lines. My mother and my brother are highly sensitive to cell phone usage and can only use land lines when making phone calls. They have Dr.s orders that verify this. Please consider that there are many people like this across the country as well as people who have no cell phone coverage in remote areas and must use a landline. Thank you for considering this.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Martha

Last Name: Warschau

Mailing Address: 408 W. 57th St.

City: New York

Country: United States

State or Province: NY

Postal Code: 10019

Organization Name: null

Please do not discontinue landlines. There must be a way to keep them as the service tool they are. In the world of telephones, they are the sturdy, reliable, worker we need. On 9/11, all of my neighbors who no longer had land lines came to my apartment to make telephone calls on my landlines - I have three!

Yes, privacy is a good reason to have them as an option, and I cherish my privacy, but that would be my last reason on the list.

For hearing issues and sensitivity, cell phones may not be usable at all. Telephone service should be available and accessible to all.

Cell phones more often than not still have bad connections. I don't think I ever have an entire conversation where I can hear everything that is said. Service calls involving cell phones take forever because of repeating inaudible words.

I am of the firm belief that cell phones will end up being the culprit and cause of serious illness to their users. We know for sure there is radiation. Period. You know the rest, nothing is proven negatively and it will take many more years to see the results. Hope you are around to see our world and results of this important piece of the issue.

You can always pick up a land line and it works, without recharging, without hunting down a new battery, without being somewhere with no signal. Of course, being outside and traveling are amazing for us and using cells as an additional telephone service, and a great one will continue and expand until they become a small chip we can implant into our skull.

In the meantime, please leave us our hardworking, sturdy, reliable, audible, emergency necessary landlines. As long as they are offered, I will never get rid of mine.

Thank you for your time.

Hope you do indeed read these all

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Christine

Last Name: Hoch

Mailing Address: P.O. Box 166

City: Haymarket

Country: United States

State or Province: VA

Postal Code: 20168

Organization Name: Center for Safer Wireless

See attached file(s)

Comments to FCC on FCC-2011-0078-0001)

I am concerned about the long-term consequences of using funds from the Universal Service Fund for broadband and voice over internet protocol services to homes and offices. This action appears to be the first step toward phasing out land lines.

Wireless connections are vulnerable to hackers and are not secure enough in our world of terrorist attacks. We don't want to jeopardize our national security and privacy to increase the profits of wireless companies. Software in cell phones can track my location, and between hackers and software, my privacy is violated.

During emergencies, such as tornadoes, floods, hurricanes, and wild fires, land lines are operational but cell phone towers get knocked down. Cell phones eventually fail with no electrical power to recharge them.

About 3% of the United States population is electrosensitive. This means they can't tolerate the pulsed radiofrequency radiation from cell phones. When they are exposed to the radiofrequency radiation they experience headaches, fatigue, insomnia, cognitive dysfunction, short-term memory loss. Voice over Internet protocol services also bother them.

I am mildly electrosensitive. I used to get headaches from talking on a cell phone throughout the day. Keeping the phone away from my head reduces my chances of getting these headaches. Even with voice over IP on my home phone, putting the phone to my ear is not pleasant for me.

More importantly, 13 of 14 studies reviewing cell phone use for 10 years or more show an increased risk of brain tumors. Even the famous Interphone Study reported in the appendix that cell phone users had a 40% increased risk of gliomas, the deadliest form of brain tumors.

While the Universal Service Fund may have outlived its usefulness, this fund could be used for a nationwide educational campaign to inform the public about the reported health effects of pulsed radiofrequency radiation. People need to understand that their fatigue, brain fog, short-term memory loss, headaches, insomnia, skin rashes, and anxiety can be caused by exposure to pulsed radiofrequency radiation. The fund could help prevent more chronic illnesses and cancer. A portion of the fund could also be used for long-term research on the health effects of cell phone use.

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: una

Last Name: st. clair

Mailing Address: 20065 Fernridge Crescent

City: Langley

Country: Canada

State or Province: British Columbia

Postal Code: V2Z 1X5

Organization Name: Citizens for Safe Technology

Strong need to maintain existing land line telephone system due to growing public awareness of health risks from mobile phone use as identified in Interphone - 1,640 hours of cellular phone use causes 40% increase in brain tumours. Further links are being found now - wrong time to eliminate land lines as many people are actually eliminating cell phone use, or at least reducing use, and are looking for land lines to use instead (also note, avoiding all forms of wireless exposure, including cordless phones).

Please analyze Swiss Government warnings and action to protect public by reducing exposure. Forcing telephone service only through cellular means is undemocratic and unsustainable and will cost greatly the health of the public

Submitter Info

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Sydney

Last Name: Davis

Mailing Address: 1220 A Senda Del Valle

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87507

Organization Name: null

The proposal to eliminate land lines increases health risks for people like myself, who are disabled, and who experience physical symptoms from wireless fields. I depend on the land line telephone system. When I am in a facility or room where there are wireless signals I can not remain in them for more than an hour without experiencing increased pain. To force me to live within a wireless field is the same as putting a rat into a cage and testing it to see how much it can take. I already know, as do my doctors and health care providers, that more wireless will degrade my physical health, which is already a struggle with my current disability impairment.

Is there a way that you can innovate without causing more harm to those of us who are already experiencing physical symptoms from increasing wireless fields?

The Architectural and Transportation Barriers Compliance Board ("the Access Board"), is the federal agency that administers the Americans with Disabilities Act. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities (<http://www.access-board.gov/research/ieq/intro.cfm>). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

Submitter Info

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Susan

Last Name: Brinchman

Mailing Address: P.O. Box 655

City: La Mesa

Country: United States

State or Province: CA

Postal Code: 91944

Organization Name: Center for School Mold Help

It would be highly negligent to eliminate landlines as 3-5% of the population cannot use cell phones due to being sensitive to the radiation and emissions; the World Health Organization has warned children and pregnant women to avoid cell phones, and for all others to reduce their cell phone usage. Landlines are a safe way to communicate and should never be eliminated. FCC regulations are obsolete with regard to safety, have not kept up with the research for the past 20 years.

Submitter Info

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Legacy Document ID:

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Nicole

Last Name: Calhoun

Mailing Address: 262A Los Pinos Rd

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87507

Organization Name: null

To whom it may concern:

I'm writing to ask that you maintain the switched telephone network. The Architectural and Transportation Barriers Compliance Board ("the Access Board"), is the federal agency that administers the Americans with Disabilities Act. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities, rendering them unable to utilize wireless technology and/or use computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

For this and many other reasons, I urge you to keep the switched telephone network operable and accessible to all.

Many thanks,

Nicole Calhoun

Submitter Info

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Nancy

Last Name: Evans

Mailing Address: 4194 Cesar Chavez Street

City: San Francisco

Country: United States

State or Province: CA

Postal Code: 94131

Organization Name: null

I am writing to urge you to maintain the switched telephone network. I am one of millions of Americans who want and need to maintain my landline telephone system for both personal and business use. Knowing the potential risk of exposure to cell phones and their supporting infrastructure, I seldom use a cell phone. I have already had breast cancer and don't want to add brain cancer to my resume.

According to the Architectural and Transportation Barriers Compliance Board, nearly 10 million Americans have electromagnetic sensitivities and cannot use cell phones or other wireless devices. They depend on the switched telephone network for voice communication. Eliminating landlines will leave millions of Americans without even basic telephone service.

Submitter Info

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Larry

Last Name: Bragman

Mailing Address: 30 Hickory Road

City: Fairfax

Country: United States

State or Province: CA

Postal Code: 94930

Organization Name: Town of Fairfax

The Town of Fairfax has heard a great deal of public testimony documenting that many local residents are electro-magnetically sensitive to wireless broadband. Please do not approve decommissioning of copper landlines until further study about the effects of non-ionizing radiation on cells, DNA and other sensitive physiological systems.

Submitter Info

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Jane

Last Name: Hall

Mailing Address: 31 Nokomis Avenue

City: San Anselmo

Country: United States

State or Province: CA

Postal Code: 94960

Organization Name: Citizen

Citizen here who requests that the FCC provide citizens the option of the switched telephone network. This is still a necessity for many of us.

Citizens like me are an estimated 3% of the population, or almost 10 million Americans with electromagnetic sensitivities (<http://www.access-board.gov/research/ieq/intro.cfm>). We cannot use wireless technology without health effects.

So I depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

We hope you will heed the recent experience of PG&E here in California who is now being forced to give citizens a fair cost option of whether to require use of wireless for utilities metering for billing and other purposes...

Citizens are not all made alike. Choices for phone service cannot be one size fits all. Maintain the switched telephone network option along with a wireless option for those who can use it. Thank you.

Submitter Info

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Garri I

Last Name: Page

Mailing Address: 70 Fawn Drive

City: San Anselmo

Country: United States

State or Province: CA

Postal Code: 94960

Organization Name: null

I depend on my landline for telephone service. I do not have nor can I use a cellular telephone.

Why am I being cut off and disenfranchised? I vote, I pay taxes, yet the FCC and cellular industry chooses to make me a non-person in the USA.

What is happening here?

Submitter Info

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Legacy Document ID:

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Edward

Last Name: Sacchette

Mailing Address: PO Box 2152

City: Paradise

Country: United States

State or Province: CA

Postal Code: 95967

Organization Name: null

Please do not do away with land line phones as a percentage of the population are not able to use wireless phones do to health related issues connected with electrosensitivity.

The Americans with Disabilities Act needs to be remembered to protect this segment of the population

Submitter Info

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Elizabeth

Last Name: Barris

Mailing Address: 3124 Broadway Apt. B

City: Santa Monica

Country: United States

State or Province: CA

Postal Code: 90404

Organization Name: AmericanAssociationForCellPhoneSafety.org

Getting rid of landlines is unethical due to the serious health findings of ipsilateral brain cancer, reproductive effects and damage to genetic material with cell phones and now published in the Motorola manuals. Also there is a population of electrosensitive people who cannot use cell phones. You can read about the health effects from cell phones in a paper we published on our website, http://www.americanassociationforcellphonesafety.org/uploads/Non_Thermal_Paper_10-10_AAA.pdf although you already know as we have notified you in writing and copied Executive Branch.

Public utilities are supposed to serve people, not just industry. Taking away peoples freedom of choice is the mark of a totalitarian/fascist form of government, not a democracy. Why not say just kill all electrosensitive people? That would be more to the point. The FCC's joint efforts with industry to allow industry to thrive at the expense of public health is today and continues to be a serious breach of public trust, a violation and serious misinterpretation of work duties, ethics and governance.

Your office has lost all credibility and needs to be restrained as it has proven itself incapable of objective view points considering all science on this issue as opposed to only industry funded results on the issue of cell phones and health effects. The fact that you would even CONSIDER removing landlines in the face of the serious health language in the Motorola manuals speaks to the corrupt nature of the FCC. We will work to have whomever is behind this removed from their position within the FCC and will hopefully create laws banning you from even working for industry which will be your next stop once you are removed from your office in the FCC to continue to try and ride your gravy train at the expense of the health and lives of innocent Americans.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Clay

Last Name: Wright

Mailing Address: 8087 Rita Bend Dr.

City: Salado

Country: United States

State or Province: TX

Postal Code: 76571

Organization Name: null

Hello.

As someone living with significant electromagnetic sensitivities, I wanted to voice my concern over this proposal and note that I currently rely heavily on the switched telephone network for my livelihood and personal communication needs.

I and many like me would be unable to use cellular devices and would struggle with IP telephony systems as well.

I ask the Commission to please not take any steps that could see the elimination of ordinary telephone services as there are many Americans that rely heavily on those services.

Thank you.

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: E

Last Name: Morton

Mailing Address: 8749 Baxter way

City: Inver Grove Heights

Country: United States

State or Province: MN

Postal Code: 55076

Organization Name: null

To do away with the landline phone service is a disservice to the citizens of our free country and we as citizens should not be denied the right to choose what's best for each of us. Landline phones are safer than cellphones for both children and adults and much more economical.

People with electromagnetic sensitivity will be denied use of a communication tool and will become isolated. The Americans with Disabilities Act is to give persons with disabilities the right to live a safe ?normal? life and by denying a person the right to choose to have a landline phone puts their life in danger.

It is absolutely necessary the U.S. government does not dictate which type of phone a person can or cannot have. Individuals have rights and those should be respected.

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Linda

Last Name: Bertram

Mailing Address: 233 Covington Ct.

City: Naperville

Country: United States

State or Province: IL

Postal Code: 60565

Organization Name: null

I am adamantly opposed to doing away with landline phones. I cannot use a cell phone or any wireless device due to electrosensitivity, tinnitus, and partial deafness. This will mean that I will be completely cut off from communicating by phone. It is highly discriminatory against the 3% of the population that is electrosensitive....I believe that is about 10,000,000 people.

It is also extremely unwise for our national security. Do you realize that during 9/11, cell phones didn't work, making it difficult for emergency workers to communicate. This was a HUGE problem. Cell phones also didn't work in Japan during the recent earthquake/tsunami. How will Americans deal with such emergencies without dependable phones. What will a person like myself do in a personal emergency? How will I call the police dept., the fire dept., etc.?

You must make accommodations for people with disabilities per the ADA. ADA recognizes electrosensitivity as a disability and protects people with it.

Submitter Info.txt

Please Do Not Reply To This Email.

Public Comments on Developing an Unified Intercarrier Compensation: =====

Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Carol

Last Name: Van Strum

Mailing Address: 7493 E. Five Rivers Rd

City: Tidewater

Country: United States

State or Province: Oregon

Postal Code: 97390

Organization Name: null

Landline service is absolutely essential to many people and must be preserved for the following unequivocal reasons:

1. Many people live in areas where there is no cell phone service. We have excellent landline service that has not had a single outage in some 20 years since the lines were buried. There is no need to replace a system that works reliably, safely and efficiently, that costs far less than cell phone service, and that is not susceptible to disruption by storms, solar eruptions, hackers, or other disturbances.
2. The long-term safety of cell phones and transmitters has not been established, and there are strong indications that their signals may cause cancer and other debilitating illness.
3. Both internet phones and cell phones themselves are unreliable and susceptible to multiple disruptions. Our landline phones are never disrupted but internet connections are frequently out of service. Landlines are therefore our only hope of getting emergency care in certain circumstances.
4. Eliminating landline service would criminally isolate and endanger some ten million citizens who cannot use wireless communications due to electromagnetic sensitivities, and many others, such as elderly people, who are unable to learn computer and cell phone use.
5. This proposed rule appears to have been devised and crafted by corporate entities and their agents for the sole purpose of increasing their profits, in disregard of public interest and human rights.

Submitter Info.txt

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Public Comments on Developing an Unified Intercarrier Compensation: =====

Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Laura

Last Name: Jolly

Mailing Address: 1963 Kiwa Rd

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87505

Organization Name: null

I only use a land line. They are safe. Convenient. I do not want to be forced into having to use a cell phone.

Period.

End of my statement. It is that simple.

Keep the choice of having a land line for those of us who are not willing to have cell phones, for our health, and well being..

Laura Jolly

Submitter Info.txt

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Cheryl

Last Name: Shoemaker

Mailing Address: PO Box 152

City: Wadmalaw Island

Country: United States

State or Province: SC

Postal Code: 29487

Organization Name: null

Disturbed over possibility of eliminating switched telephone networks in favor of VOIP and cellular phone use for the following reasons:

- 1.) Not all areas of the country are successfully covered by cell towers (our home is in a completely unreliable area for any carrier).
- 2.) Not all areas of the country have DSL available (and satellite connections are unaffordable to many who live in such areas), many in these areas are still solely reliant on dial-up internet service, VOIP service does not work over dial-up.
- 3.) Not everyone has a computer or is able to use a cell phone. Many MCS (multiple chemical sensitivity) individuals eventually become electrically and radio signal sensitive as well and eventually have to give up use of cell phones, can't be near satellite TV dishes etc. and can often not tolerate computer use. These cases are ever increasing as a result of our modern lifestyle.
- 4.) During natural disaster such as hurricane etc., government agencies get priority over cell tower bandwidth and any remaining bandwidth is jammed with people trying to make calls... in essence making the system impossible/non-functional.
- 5.) One can't expect the elderly to learn to cope well with new technology and especially not during an emergency... they need their landlines.

If eliminating switched telephone networks is truly part of what is proposed I think it's a really bad idea.

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Marjorie

Last Name: Mills

Mailing Address: 8582 Garden Home Trail

City: Snowflake

Country: United States

State or Province: AZ

Postal Code: 85937

Organization Name: none

I do Not want to eliminate wired, land-line phones in the United States! I am chemically and electrically sensitive and cannot use cell phones. I depend on my land line for health, safety, supplies and social contact.

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Dee

Last Name: Scott

Mailing Address: P.O. Box 317

City: Mound

Country: United States

State or Province: MN

Postal Code: 55364

Organization Name: null

Landlines are safe. I cannot use a wireless phone without getting an immediate headache.

Landlines are secure and reliable. We don't want any more of our money spent to replace current, dependable, affordable technology.

We already have the infrastructure for landlines. Equipment for landlines is durable and economical.

Mobile phones and computers need constant repair, upgrades and replacement.

Equipment for landlines is durable and economical.

Landlines are easy to use and do not destroy our environment!

As a nation, we must reduce our use of power and greenhouse gas emissions. Corded landlines require minimal electricity compared with antennas that emit radiation continuously. Cellphones require recharging. This is not the time to buy new devices or install new infrastructure that demands more electricity production.

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Sara

Last Name: Morgan

Mailing Address: PO Box 687

City: El Prado

Country: United States

State or Province: NM

Postal Code: 87529

Organization Name: null

To eliminate all landline phone systems is a terrible and dangerous idea. I have had 3 cancers, one of them considered terminal in 1997. Through deep study and immersion in alternative medical treatment modalities and lifestyle, I managed to overcome "impossible" odds and become well and totally clear of cancer. One of the areas I discovered was the potential health hazards posed by cellular phones. If I had not had the choice of not using cell phones I do not know that my healing efforts would have been successful. In many European countries cellphone use is banned for children under age 12. How can we be less cautious than they have have deemed essential. At very least LET US HAVE CHOICE!
Thank you.

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: James

Last Name: Mills

Mailing Address: 8582 Garden Home Trail

City: Snowflake

Country: United States

State or Province: AZ

Postal Code: 85937

Organization Name: ARENA

I do NOT want to eliminate wired, land-line phones in the United States! My wife is multiply chemically sensitive and cannot use cell phones. She depends on her land line phone for health, supplies and social contact.

Submitter Info.txt

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Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Mary

Last Name: Odegaard

Mailing Address: 222 San Juan

City: Santa Cruz

Country: United States

State or Province: CA

Postal Code: 95062

Organization Name: null

I choose to use only a land line telephone, for health and economic reasons.
Switched telephone network must be maintained!!!!

Sincerely Mary T. Odegaard

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Jean

Last Name: Lavigne

Mailing Address: 52 4th St

City: Waterford

Country: United States

State or Province: NY

Postal Code: 12188

Organization Name: null

I just read about the phaseout of telephone land lines. Our home is equipped only with wired landlines. We DO NOT cell phones and cannot afford them.

It is an extreme health concern to use wireless equipment. Ill effects may not show up immediately, but the future health effects are my concern.

Quality of conversation transmission on wireless equipment is extremely poor. I use only landline equipment when I can. Please do not phase out the switched telephone network.

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Diane

Last Name: La Voy

Mailing Address: 3416 Bellevue Avenue

City: Cheverly

Country: United States

State or Province: MD

Postal Code: 20785

Organization Name: null

It is very important to keep land line telephones. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities (<http://www.access-board.gov/research/ieq/intro.cfm>). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. Eliminating landlines will leave millions of Americans without even basic telephone service.

Submitter Info.txt

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Patricia

Last Name: Waldygo

Mailing Address: PO Box 61

City: Cerrillos

Country: United States

State or Province: NM

Postal Code: 87010

Organization Name: self-employed writer and artist

Dear FCC,

I'm very upset about your plan to phase out landline telephones and switch exclusively to wireless. I make a living editing books for out-of-state publishers, and I work at home and send the books over the Internet--via DIALUP. I cannot work on wireless computers; they make me nauseous. I've tried on a friend's WiFi computer. I also do not own a cell phone for the same reason. I am not extremely electrically sensitive, but enough so that if the entire country switched to wireless, I wouldn't be able to have a telephone or a computer at all. Who would support me then? What would I have to do, move to some remote log cabin with no technology?

Your plan is very short-sighted for another reason. In Hong Kong, South Korea, and other Asian countries, they are switching to ultra highspeed fiberoptic Internet, with upload and download speeds of over 1 Gigabyte per second. Fiberoptic is the technology of the future.

My rural town is fighting to get DSL here. We have several forms of wireless available, but recently we held a vote of the 135 households, and 77 want DSL. We are starting a petition for the PRC to get Qwest to install DSL here.

Please consider the millions of people who cannot use wireless. You would be sending us back to the Stone Age if you restrict us from using technology by eliminating landline and making only wireless available.

Sincerely,
Patricia Waldygo

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: D.

Last Name: Hamilton

Mailing Address: PO Box 531

City: LaVeta

Country: United States

State or Province: CO

Postal Code: 81055

Organization Name: null

DO NOT ELIMINATE MY LANDLINE. I live in a rural area, and do my very best to minimize my exposure to WIFI. It remains very difficult as have been evidenced by the continuing use of satellite to upgrade cell phone service. We take every effort to minimize wireless exposure in our home. This proposal eliminate any option for many of us to maintain our health. Research will continue to validate the health hazards of electromagnetic energy and your children will pay a more maximum price than adults making this policy.

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Beth

Last Name: Andresen

Mailing Address: 10 Harpers Ferry

City: Richardson

Country: United States

State or Province: TX

Postal Code: 75080

Organization Name: null

Please do not eliminate land-lines and wired telephone service in the United States.
We rely on it in our home due to heart problems aggravated by wireless signals.

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: KT.

Last Name: Eckardt

Mailing Address: 1381 Cedar St.

City: San Carlos

Country: United States

State or Province: CA

Postal Code: 94070

Organization Name: Eckardt & Associates

The switched telephone network must be maintained!!! Do NOT eliminate wired, land-line phones in the United States!

What are you people thinking????? You have no right to deprive us of all means of communication. IT IS UNAMERICAN TO FORCE EVERYONE INTO COMPLIANCE!!! I do not want to be radiated any more than we already are with EMF's. And I cannot imagine that any of you know the least little bit what this would do to human biology. Or let me imagine that you say, as all the rest with the proliferation of wireless, "There's no danger." The hell there's not. There's plenty of it and WE/YOU KNOW IT.

I was asked to join a wireless company, no landlines, and I refused. I do not want to be wireless at all, but have a cellphone out of necessity. My neighbor's wireless is radiating me like it or not, and vice versa. It's like second hand smoke, but at least you can smell it. This, you have no idea. And the data is real, undeniably real that wireless is already affecting our bodies and minds, not to mention sterility concerns.

You cannot put our futures at such high risk. It is irresponsible, catastrophically ignorant and absent any consideration for the known deleterious effects. Might as well ask for all of Japan's nuclear waste. Bring it here. We don't care. We like radiation!

Whoever thought of this, should be sent one-way to Chernobyl and/or drop-shipped to the nuclear reactors that are blown to smithereens in Japan. I'll buy your ticket.

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Barbara

Last Name: Sargent

Mailing Address: PO Box 531

City: LaVeta

Country: United States

State or Province: CO

Postal Code: 81055

Organization Name: null

I was stunned to hear this was a proposal by the FCC. It seems this is just for monetary gains with little regard for the health of so many children and people of all ages in our country. The extensive research, though only now coming to light about the health challenges from electromagnetic wave technologies will only continue to provide evidence of the harm these energies are doing to the population as a whole. Some of us prove to be more sensitive than others and the debilitation effects our lives, our families, our ability to work. It is critical that the option of maintaining a land line for my voice and media needs is critical. I strongly oppose the FCC proposal to eliminate the presence of land lines.

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Nan

Last Name: Marshall

Mailing Address: 323 Pine St.

City: Viroqua

Country: United States

State or Province: WI

Postal Code: 54665

Organization Name: null

I believe that land lines serve a very important function. Aside from the fact that I dislike using cell phones as I find communication on them difficult, I am also uncomfortable with the potential health risks posed by cell phones. I still use corded phones in my home.

In addition, there is privacy afforded with the use of land lines that is not possible with cell phones. Also, you do not have to worry about batteries failing with a landline, which could become an important consideration during an emergency.

Landlines are also necessary for people with disabilities.

Landlines are also more affordable than cell phones. Now that our family does not get cell phones through our work, we are glad to have a landline.

Finally, I have recently read that it takes much less energy to power a landline connection than to keep a cell antenna operating. As our energy prices start going up, I'm sure this is something we'll all be keeping our eye on.

For all these, as well as other, reasons, please keep our landlines around.

Nan Marshall

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Mary

Last Name: McGraw

Mailing Address: 6812 Outland Drive

City: Plano

Country: United States

State or Province: TX

Postal Code: 75023

Organization Name: null

This system has erased my entry twice in a row when I tried to backspace. I'm retyping for the 3rd time. How many responses have you lost because people gave up?

IF you are considering banning landline phones and replacing them with cell phones PLEASE DON'T. I STRONGLY OBJECT to such an idea.

Cell phones are health hazards--brain tumors, danger to wildlife, European physicians have petitioned their governments to stop the proliferation of cell phone use and towers due to the health problems they pose.

They cause significant pain and problems for some sensitive people who can't tolerate them. Those people need landlines.

Some people don't want to live near the towers and they don't need to be everywhere. Leave some healthy, un--electrified places in the country for those who don't want to live with the problems they cause--the ugliness, the frequencies (which are picked up by water), the disruption of nature. You may not be as sensitive as others and it may seem unlikely that people or nature could be harmed but it doesn't mean you are right about this. You just aren't able to detect the effects.

Cell phones aren't secure. Hackers can eavesdrop. This is one of the main reasons I keep a landline.

The other main reason is that it is noxious to use them for long periods of time and hard to hear on them for many people. They pick up extraneous sound such as wind, music, etc., making it even harder to hear. I use a cell phone but they bother me and I use my landline as much as possible. I want to keep the option of a landline. It really matters to me. My aging parents really have trouble hearing when I call them on my cell. They also can't hear the cell phone ring as well as they can the home phone.

I hope you aren't planning to eliminate landline phones or make them too expensive to use. It would really make my life worse.

Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: K E

Last Name: Gold

Mailing Address: PO Box 489

City: Chimayo

Country: United States

State or Province: NM

Postal Code: 87522

Organization Name: null

I strongly oppose the elimination of the switched telephone network and the Universal Service Fund.

First, scientific evidence is beginning to mount that cell phones and Bluetooth may pose major health risks to the population. So far, we are all unintentionally subjects in a massive clinical trial to see whether the technology is safe, and the results are not yet known.

Moreover, such a policy change would undoubtedly harm the 10 million Americans who are known to have severe electromagnetic sensitivity to cell phones and computers. These people are already disabled by existing wireless networks, and it is unconscionable to cause this disabled population additional health problems.

Finally, landlines are essential in rural areas such as the area where I live, especially during emergencies. We frequently lose electrical power and cell phone service in my area, and I live near Los Alamos, which could easily become a target of terrorist attacks.

Thank you.

K Elizabeth Gold

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Gail

Last Name: Schneiderman

Mailing Address: 437 Sandy Lane

City: Wilmette

Country: United States

State or Province: IL

Postal Code: 60091

Organization Name: null

We urge you not to take away our right to keep and use our land line phones. They are reliable and safe. Thank you.....

Submitter Info.txt

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Legacy Document ID:

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Lori

Last Name: Laingor

Mailing Address: 3510 Lee Hill Dr

City: Boulder

Country: United States

State or Province: CO

Postal Code: 80302

Organization Name: citizen

Please preserve land-line telephone service. I am very sensitive to electromagnetic fields, and cannot use wireless. Thank you

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Alice

Last Name: Burger

Mailing Address: 10255 La Hacienda Ave. Apt. B

City: Fountain Valley

Country: United States

State or Province: CA

Postal Code: 92708

Organization Name: null

I would like to oppose the proposal to abandon Landline Phones. I use my landline phone all the time, and am greatly concerned on the findings of the effects of radiation emitted from cell phones. Please consider the long term effects of cell phone use and give us an option. Do not abandon Landline telephone lines.

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Matthew

Last Name: Sluder

Mailing Address: 885 Fulton St.

City: San Francisco

Country: United States

State or Province: CA

Postal Code: 94117

Organization Name: null

To Whom It May Concern,

The health affects of wireless or radio frequency are being better and better documented. Commentary and testimony by researchers and public health policy makers across the globe has shown that exposure to these technologies impart harm. We have learned that there are many electro-sensitives in the population who have become too ill to work because of increased exposures that they can't protect themselves from. Many citizens need a choice about exposure to wireless including broadband.

The switched telephone network must be maintained!

The Architectural and Transportation Barriers Compliance Board ("the Access Board"), is the federal agency that administers the Americans with Disabilities Act. According to the Access Board, an estimated 3% of the population, or almost 10 million Americans, have electromagnetic sensitivities (<http://www.access-board.gov/research/ieq/intro.cfm>). They cannot use wireless technology and have difficulty using computers. They depend on the switched telephone network for voice communication. "Universal Service" is not universal if it excludes 10 million people. Eliminating landlines will leave millions of Americans without even basic telephone service.

Please do not allow telecommunication companies to eliminate land line service or to charge more for basic service!

Submitter Info.txt

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Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Steen

Last Name: Hviid

Mailing Address: 5708 Martin Rd.

City: Snowflake

Country: United States

State or Province: AZ

Postal Code: 85937

Organization Name: null

Comment to the FCC:

I ask the FCC to conduct a study to determine how many people in the United States are unable to use a cell phone for prolonged calls, due to the direct health effects (i.e. pain, etc).

Such a study must be done independently of the cell phone industry, as experience shows that their studies tend to support their interests, while independent studies do not. The study should be a survey of random people, asked a suitably worded question.

Based on various prevalence studies of electromagnetic hypersensitivity, I expect the result will show that 5 to 10 million Americans are unable to use a cell phone today. Dismantling the circuit-switched telephone network will be a disaster for these people, including myself.

Digital VoIP phones are not a usable alternative. The FCC must make sure that we have access to non-radiating telephones, and start to be a little more suspicious of the telecom industry's cigarette science.

Steen Hviid - engineer
928-536-3563

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Judy

Last Name: Shutes

Mailing Address: 12175 Shenandoah Rd

City: Middletown

Country: United States

State or Province: CA

Postal Code: 95461

Organization Name: null

Under no circumstances do I approve of the FCC making changes that take away landlines. I, for one, am unable to use a cell phone. I get a very sick headache, pressure in my head and get dizzy. I depend on my landline to be in touch with my friends and family. I also know many other people who are unable and unwilling to have long conversations on cell phones. The most probable health effects of RF radiation are turning up more and more and will eventually prove that cell phones increase cancer exponentially. Please do not take these drastic steps to only push cell phones and other sources of radiation. More and more of the population will become ill and you'll have a major fight on your hands with activists taking to the streets! There are already thousands of people who are sickened more and more due to the air waves being polluted by microwave radiation. Be making the changes you propose, you'll be creating a great increase in electrical sensitivity, which I have. I'm unable to be around WiFi (get really dizzy) and as I already wrote, I'm unable to talk on a cell phone. Please consider other people, not the almighty dollar!!

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Susan

Last Name: Fleming, M D.

Mailing Address: 5890 N Calle Kino

City: Tucson

Country: United States

State or Province: AZ

Postal Code: 85704

Organization Name: null

Dismanteling switched telephone networks will be disastrous to rural areas that are underserved even with the system we have today. Universal Service Fund subsidies are essential to keep access to phone service affordable to everyone.

In addition, there are large numbers of people with electromagnetic sensitivities who cannot use wireless technology. These people cannot use computers for the same reason.

We are being bombarded with one wireless assault after another with no clear understanding of the health consequences of this exposure. We don't need cell service to the exclusion of switched networks. We need the competition to keep prices reasonable for everyone.

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Agnes

Last Name: Lawless

Mailing Address: 72 Maynard Street

City: Roslindale

Country: United States

State or Province: MA

Postal Code: 02131

Organization Name: null

I am deeply concerned about the FCC's proposed elimination of landlines. This will make it impossible for those Americans who have electromagnetic sensitivities to have any telephone access. I have a very close friend (and know of others) who cannot use any cell phones or computers -the electromagnetic radiation from them make her extremely ill. She depends on a landline phone. It is crucial for her well being and for her communication purposes.

Please..do not eliminate landline phones - the switched telephone network must be maintained.

Thank you.

Submitter Info.txt

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Public Comments on Developing an Unified Inter-carrier Compensation: =====

Title: Developing an Unified Inter-carrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Robert

Last Name: VanEchate

Mailing Address: p.o. box 61

City: frankfort

Country: United States

State or Province: NY

Postal Code: 13340

Organization Name: null

Please do not take away the land lines in america, I can not use a cell phone because of radiation sickness and you will take away my ability to communicate, and would disrupt my life in too many ways to imagine.

Submitter Info.txt

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FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Carol

Last Name: Thorman

Mailing Address: 191 Willowbrook Drive

City: Plymouth

Country: United States

State or Province: WI

Postal Code: 53073

Organization Name: null

It is my understanding that you are considering shifting landline maintenance funding to cell networks. Please know that I greatly value my landline and hope that you will reconsider this idea.

Thank you.

Submitter Info.txt

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Title: Developing an Unified Intercarrier Compensation

FR Document Number: 2011-04399

Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Melinda

Last Name: Wilson

Mailing Address: PO Box 390892

City: Cambridge

Country: United States

State or Province: MA

Postal Code: 02139

Organization Name: null

It is important to me that the current land line system supported by the Universal Service Fund be maintained.

Two and a half years ago I moved unawares into an apartment that was being hit by a cell phone provider beam. Within a few days I could feel it. Within a week I could no longer use my cell phone - it caused severe pain and spatial disorientation. Within a few weeks after that I could no longer use a computer - it caused a strong skin reaction. I can't spend much time near WIFI. I have developed electrohypersensitivity (EHS) due to exposure to wireless technology. More people continue to come down with this disorder, and it appears to be permanent.

I am currently in the process of moving to a much more rural area to get away from wireless exposure. If landlines are de-funded they will cease to exist, and people like me will be with communication.

Wireless technologies have not been established as safe. More and more information is coming out about the dangers of wireless.

Please continue to fund the creation and maintenance of landlines.

Sincerely, Melinda H. Wilson

Submitter Info.txt

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FR Document Number: 2011-04399

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Pat

Last Name: Bard

Mailing Address: 130 8th Ave

City: Brooklyn

Country: United States

State or Province: NY

Postal Code: 11215

Organization Name: null

Please safeguard our telephone landlines. We do not consider wireless either reliable or entirely safe. We especially worry about the siting of base stations and antennae. Concern for the public, it seems to us, is not nearly so important to the phone companies as their concern for their maximum convenience and profit. Thank you.

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Submitter Info.txt

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Legacy Document ID:

RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Jill

Last Name: Koskinen

Mailing Address: 73 2nd St

City: Laurum

Country: United States

State or Province: MI

Postal Code: 49913

Organization Name: -

Please continue to maintain the analog circuit-switched telephone network, our system of traditional landlines. This system continues to play an important role in U.S. communications, including during times of emergency. In addition, it is the only telecommunications system that many electrically sensitive people are physically able to use. Estimates suggest there could be 10 million Americans affected by such electrical sensitivities. Traditional landlines must be maintained to continue providing truly universal phone service.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Sheryl

Last Name: Senkiw

Mailing Address: 4750 Aldrich Ave N

City: Minneapolis

Country: United States

State or Province: MN

Postal Code: 55430

Organization Name: null

It is important that we keep land line telephones. There are too many wireless communications clogging the air already. And eventually we will learn the side effects on the health of humans, animals, insects and the environment. When we do, we don't want to have to rebuild the whole land line system. So keep it in the wires.

I have a land line phone, and want to keep it.

Thank you.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Millie

Last Name: Sumborg

Mailing Address: 8333 Rockin R Ranch Road

City: Snowflake

Country: United States

State or Province: AZ

Postal Code: 85937

Organization Name: null

RE: Proposal to eliminate land line phones

I suffer from a debilitating environmental illness called electromagnetic hypersensitivities, EHS, and I am unable to use a cell phone or computer due to the severe reactions this technology evokes. My disability keeps me shut in my house and a wired land line is the only form of communication I have with the outside world. Stripping this service away from me would be like taking a wheelchair away from someone who can't walk on their own.

The percentage of individuals with this medical condition is quickly escalating due to an increase in cell phone and computer use, the number of cell phone towers, the proliferation of wifi, and other low level EMF technology in our society. In my opinion, the decision to discontinue switched telephone networks must be considered from both a healthcare and human rights perspective - not just a financial / business perspective.

If modifications are necessary in this industry, provisions must be made for the 10+ million EMF sensitive or intolerant individuals throughout the US that rely on a traditional phone line for their survival.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Erica

Last Name: Elliott

Mailing Address: 2300 W. Alameda #A-2

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87507

Organization Name: Holistic Family Practice

It is critical that the landlines NOT be phased out. There is a growing number of people who are electromagnetically sensitive, up to 3% of the population, who would not be able to use anything other than corded communication, i.e., corded phones. The numbers of people with electromagnetic hypersensitivity syndrome is rapidly growing....sadly. I have seen the numbers grow over the past decade in my medical practice.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: David

Last Name: Lambert

Mailing Address: 2113 Keith Way

City: Eugene

Country: United States

State or Province: OR

Postal Code: 97401

Organization Name: null

Please consider this comment in opposition to removal of landline technology. There is plenty of evidence to support the notion that cellular technology is unsafe. Little research has been conducted to show the long term affects on both humans, animals, and plant species.

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Ann

Last Name: Febiger

Mailing Address: 47 Bray Street

City: Gloucester

Country: United States

State or Province: MA

Postal Code: 01930

Organization Name: null

I am electrically sensitive. Using a mobile telephone gives me a headache. I rely on land line telephone. Eliminating the land line would discriminate against electrically sensitive people, and would be counter to the Americans with Disabilities Act. It would be discriminatory against people who do not own mobile telephones. Land line must be an available option for all people.

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Victoria

Last Name: Maxfield

Mailing Address: 641 Wicklow

City: Colorado Springs

Country: United States

State or Province: CO

Postal Code: 80918

Organization Name: List member Green Canary yahoo group

This is to request corded phones still be allowed in both residential dwellings as well as businesses. Thousands of people with cancers/leukemia etc., immune damage, disorders, or deficiencies simply cannot be exposed to wireless frequencies. We can avoid Wi-Fi Cafes and other public arenas, but our homes are our havens.

Below are but a very few websites explaining the deleterious effects on the body of Wi-Fi/cell phones and cordless phones utilizing Extremely Low Frequencies. And these injurious effects are substantiated upon those persons who have UN damaged immune systems let alone those with compromised health!

<http://electricsense.com/815/cordless-phones-even-more-dangerous-than-cell-phones/>

http://newconnexion.net/articles/index.cfm/2006/05/Cordless_Phones.html

http://www.ehow.com/list_6185182_dangers-cordless-phones_.html

<http://www.quantumbalancing.com/news/cordlessphones.htm>

On behalf of those with such severe sensitivities and reactions I appeal to you to change your plans for legislation and allow Americans the personal freedoms to protect their health and to make personal decisions affecting their health in their immediate environments.

Most gratefully yours,

Submitter Info.txt

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RIN:

Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Elizabeth

Last Name: Millard

Mailing Address: 2012 Valle Rio

City: Santa Fe

Country: United States

State or Province: NM

Postal Code: 87505

Organization Name: null

Do not under any circumstances prevent U.S. citizens from being able to have landline telephones. Many of us are adversely affected by cell phones. There are many studies from the U.S. and Europe showing that cell phones, cell antennas, and other microwave technology cause harm to living beings, humans in particular. Furthermore, landlines provide the only telephone service to continue operation in power outages. Landlines are essential for our well being and security. Do not prevent our ability to have these landlines available for our use.

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Sara

Last Name: Sunstein

Mailing Address: 1800 Stromberg

City: Arcata

Country: United States

State or Province: CA

Postal Code: 95521

Organization Name: null

I urge you to continue land lines for telephones. These are my reasons:

1. In rural areas such as Arcata, where I live, the power goes off periodically. Land lines still work even when the power is out.
2. In rural areas such as Arcata, where I live, the wireless grid goes down several times a year it seems, and nothing that depends on that network works. Land lines are the only phones available.
3. Discontinuing land lines will probably contribute to the further consolidation of media providers, a true threat to our democracy and freedom of information.
4. Some people, including myself, are highly sensitive to the wireless frequencies associated with cell phones and wifi. I get headaches and feel woozy when I'm near cell phones--let alone using one-- in an internet cafe, or near these new so-called SmartMeters. When visiting friends whose guest room has a smartmeter on the wall, I have a tough time sleeping. Others I know get even more severe reactions.

In summary, for the sake of availability and continuity of communication and people's health, I urge you to leave phone land lines totally intact and functional. If it ain't broke, don't throw it out. Thank you for your consideration.

Sincerely,
Sara Sunstein

Submitter Info.txt

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Publish Date: 3/2/2011 12:00:00 AM

Submitter Info:

First Name: Richard

Last Name: Conrad

Mailing Address: 84-1330 Mauna'olu St.

City: Wai'anae

Country: United States

State or Province: HI

Postal Code: 96792

Organization Name: null

RE: FCC proposal - Developing an Unified Inter-carrier Compensation -
FCC-2011-0078-0001

Landline service is absolutely essential to many people and must be preserved.

There is a portion of the populace who cannot use wireless technologies due to health constraints, especially those with electromagnetic sensitivities. This prevents them from using the cellular phone system. These people rely exclusively on the landline switched telephone network for voice communication.

Removing landline service would deny these people access to phone service, a fundamental and essential right and resource. This would also constitute a serious violation of the Americans with Disabilities Act (ADA). In light of these facts, it is clear that elimination of landline service should be prohibited.

For a brief review of pertinent information regarding those with environmental sensitivities, please visit the U.S. Architectural and Transportation Barriers Compliance Board (Access Board) at
<http://www.access-board.gov/research/req/intro.cfm>

Richard H. Conrad, Ph.D.
84-1330 Mauna'olu St.
Wai'anae, HI 96792